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120

VVRIVRRISR 129

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C;Superfamily: SAM nomology <SAM>F;48-115/Domain: SAM homology <SAM>
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Rubmitted to the EMBL Data Library,
A;Reference number: S43563
A;Accession: S43566
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C;Species: Caenorhabditis elegans
C;Specie 07-Sep-1994 #sequence_revision 10-Nov-1995 #text_change 17-Apr-1998
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                                                                                                                 R;Avakov, A.S.; Bolotin, A.P.; Sorokin, A.V.
Dokl. Biochem. 24, 1363-1372, 1990
A;Title: Structure of the metalloprotease gene in Bacillus brevis.
                                                                                                                                                                                              hypothetical protein 1 - Bacillus brevis (fragment)
C;Species: Bacillus brevis
C;Date: 02-Aug-1996 #sequence_revision 02-Aug-1996 #text_change 15-Oct-1999
                                                                                                                                                                                                                                                                                   RESULT 14
A;Cross-references: EMBL:X61286;.NID:g39378; PIDN:CAA43587.1; PID:g388219
                                                                                                                                                                                                                                                                    140094
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ubmitted to the EMBL Data Library, March 1998
ubmitted to the EMBL of a novel gene, Xin,
                                                     Reference number: I40094;Accession: I40094;Reference number: I40094;Status: preliminary; translated from GB/EMBL/DDBJ
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;Residues: 1-740 <LIG>
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                     ;Molecule type: DNA
;Residues: 1-87 <RES>
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Pred. No. 1.4e+02;
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Pred. No. 3.
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RESULT 15
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Search completed: June Job time: 7.97872 secs
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A;Experimental source: strain Orsay
                                                                                                                                                                                                                                                                                                                                       submitted to the EMBL Data Library, July 1999
A;Description: Pyrococcus abyssi genome sequence: insights into archaeal chromosome stri
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                                                                                                                                                                                  C;Superfamily: Pyrococcus abyssi hypothetical protein PAB2164
                                                                                                                                                                                                  A;Gene: PAB2164
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A; Residues: 1-117 < KAW>
                                                                                                                                                                                                                                                                                         A; Status: preliminary
                                                                                                                                                                                                                                                                                                         A; Accession: A75220
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                                                                                                                                                                                                                                                                                                                                                                                      C; Accession:
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C;Species: Pyrococcus abyssi
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Best Local (
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Best Local 9
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8; Conservative
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              2003, 12:03:08
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Pred. No.
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29;
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R;Stover, C.

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Yuan,

Pham, X.Q.; Erwin, A.L.; Mizoguchi, S.D.; Warrener, Y.; Brody, L.L.; Coulter, S.N.; Folger, K.R.; Kas,

P.;

Hickey, Larbig,

; Lory, S.; Olson, M.V.

Nature 406, 959-964, 2000

A;Title: Complete genome sequence of Pseudomonas aeruginosa
A;Reference number: A82950; MUID:20437337; PMID:10984043
A;Accession: A83253

PAO1,

an

A; Molecule type: DNA A; Status: preliminary

Residues: 1-316 <STO>

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A; Molecule type: DNA
A; Residues: 1-221 < KUR>
                                                                                                                                                              R;Wood, D.W.; Setubal, J.C.; Kaul, R.; Monks, erage, G.; Gillet, W.; Grant, C.; Guenthner, Karp, P.; Romero, P.; Zhang, S. Science 294, 2317-2323, 2001
                                                        A;Status: preliminary
                                                                       A; Accession: AF3141
                                                                                                                               A; Authors: Yoo, H.; Tao, ster, E.W.
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C; Superfamily: |
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A; Residues: 1-221 < KUR>
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A.; Liu, F.; Wollam, C.; Allinger, M.; Doughty, D.; Scott, C.; Lappas, C.; Markelz,
Science 294, 2323-2328, 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   probable amino-acid ABC transporter permease protein y4tF AGR_L_252 [imported] C;Species: Agrobacterium tumefaciens C;Date: 22-Oct-2001 #sequence_revision 22-Oct-2001 #text_change 11-Jan-2002 C;Accession: F98146
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A;Experimental source: strain PAO1
                                                                                                                                                                                                                                                                                      hypothetical protein Atu4754 [imported] - Agrobacterium tumefaciens (strain C58,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Gene: wbpK; PA3146
                                                                                       ;Title: The Genome of the Natural Genetic;Reference number: AB2577; PMID:11743193
                                                                                                                                                                                                                                  Species: Agrobacterium tumefaciens
Date: 11-Jan-2002 #sequence_revision 11-Jan-2002 #text_change 01-Feb-2002
Accession: AF3141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Superfamily: histidine permease
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PID:g17743262;
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 GSPDB:GN00187
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C;Geneti
A;Gene:
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A;Authors: Sqares, R.; Sulston, J.E.; Taylor, K.; Whitehead, S. A;Title: Deciphering the biology of Mycobacterium tuberculosis A;Reference number: A70500; MUID:98295987; PMID:9634230
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E70602
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                                                                                                                                                                                                                                                      R;Cole, S.T.; Brosch, R.; Parkhill, J.; Garnier, T.; Churcher, C.; Harris, D.; Gordon; Connor, R.; Davies, R.; Devlin, K.; Feltwell, T.; Gentles, S.; Hamlin, N.; Holroyd, Rajandream, M.A.; Rogers, J.; Rutter, S.; Seeger, K.; Skelton, S.; Squares; S.
                                                                                                                                                                                                                                                                                                      probable membraneprotein weakly - Mycobacterium tuberculosis (strain H37RV) C;Species: Mycobacterium tuberculosis C;Species: Mycobacterium tuberculosis C;Date: 17-Jul1-1998 #sequence_revision 17-Jul-1998 #text_change 22-Oct-1999 C;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 22-Oct-1999 C;Accession: E70602
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                                                                                                                             A; Molecule type: DNA
A; Residues: 1-503 < COL>
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A;Status: preliminary; nucleic acid
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C; Superfamily: histidine
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A; Introns: 89/2; 213/1; 316/1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      probable aspartate transaminase (EC 2.6.1.1) C14E2.2 [similarity]
C;Species: Caenorhabditis elegans
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Cross-references:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: DNA
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                                                                                              Experimental
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                                                                                                             : Z94752;
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72.7%;
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                  Score 36;
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74;
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                                                                                                              PIDN:CAB08157.1; PID:e1299780
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dihydropteroate synthase (EC 2.5.1.15) [imported] C;Species: Brucella melitensis C;Date: 01-Feb-2002 #sequence_revision 01-Feb-2002
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AF3371
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A;Authors: Kahn, D.; Kahn, M.L.; Kalman, S.; Keating, D.H.; Kiss, E.; Komp, hebault, P.; Vandenbol, M.; Vorholter, F.J.; Weidner, S.; Wells, D.H.; Wong, A;Title: The composite genome of the legume symbiont Sinorhizobium meliloti.
A;Reference number: A96039; MUID:21368234; PMID:11474104
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                                            A;Cross-references: DDBJ:AP000060;
A;Experimental source: strain K1
C;Genetics:
                                                                                                                                                                            A;Title: Complete genome sequence of an aerobic hyper-thermophilic Crenarchaeon, Aeropy A;Reference number: A72450; MUID:99310339; PMID:10382966
                                                                                                                                                                                                              R;Kawarabayasi, Y.; Hino, awa, H.; Takamiya, M.; Mau DNA Res. 6, 83-101, 1999
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                                                                                                   A; Molecule type: DNA
A; Residues: 1-105 < KAW>
                                                                                                                                                           A; Reference number: A72450; A; Accession: H72708
                                                                                                                                                                                                                                                                                                                                    probable ribosomal protein L31 APE1087 - Aeropyrum pernix (strain K1)
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                                                                                                                                       A;Status: preliminary
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Nyfitle: The genome sequence of the facultative intracellular pathogen Brucella melitens Reference number: AD3252; PMID:11756688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;Map position: I
;Superfamily: dihydropteroate synthase; dihydropteroate synthase
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Best Local :
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                                                                                                                                                                                                                                                                                         Species: Aeropyrum pernix
Date: 20-Aug-1999 #sequence_revision
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Cross-references: GB:AE008917; PIDN:AAL52137.1; PID:G17982913; GSPDB:GN00190
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      Superfamily:
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      rat ribosomal protein L31
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                                                                                                                                                                                                                                    Y.; Horikawa, H.; Yamazaki, suda, S.; Funahashi, T.; Tana
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Pred. No.
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Pred. No.
                                                                              NID:g5104188;
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27;
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                                                                              PIDN:BAA80072.1; PID:d1043858; PID:g510
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Tanaka, T.; Kudoh,
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D.H.; Wong,
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probable NAD-dependent epimerase/dehydratase WbpK PA3146 [imported] - C;Species: Pseudomonas aeruginosa C;Date: 15-Sep-2000 #sequence_revision 15-Sep-2000 #text_change 31-Dec
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RESULT
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A;Title: Sequence analysis of the cellulase-encoding ce
A:Reference number: JT0585; MUID:92039050; PMID:1937031
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A; Residues: 1-170 < GUI>
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C;Accession: JT0588
                                                                                                                                   A, Map position:
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                                                                                                                                                                                                                                                                                                    S.; Smith, H.O.; Venter, J.C
Science 286, 1571-1577, 1999
                                                                                                                                                                                                                                                                                                                                                 R; White, O.;
                                                                                                                                                                                                                                                                                                                                                                            C;Species: Deinococcus radiodurans
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999
                                                                                                                                                                                                                                                                                                                                                                                                             hypothetical
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C;Species: Erwinia chrysanthemi
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                                                                                                                                                                                                                                          A;Status: preliminary
                                                                                                                                                                                                                                                                                        A; Title: Genome sequence of
                                                                                                                                                                                                                          , Molecule type: DNA
                                                          Best Loc
Matches
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;Cross-references: GB:AE001911;
;Cross-references: strain R1
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Superfamily: Erwinia chrysanthemi hypothetical 20K protein (celY region);
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                                                                                       Query Match
                                                                                                                     Superfamily:
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Deinococcus radiodurans
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T.; Zalewski,
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#text_change 31-Dec-2000

Pseudomonas

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                                                                                                                                                 seq length: 0
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PIR 73:*
1: pir1:*
2: pir2:*
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4: pir4:*
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54
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Copyright (c) 1993 - 2003 Compugen
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| 351 2 G71415 561 2 G95367 279 2 AF3371 105 2 H72708 170 2 JT0588 170 2 JT0588 316 2 C75508 316 2 A8325 321 2 F98146 | NNN | N | N | 503 2 740 2 | | 87 | | | 24 | 5 | | 16 | 16 | | | | | | |
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R;Barnett, M.J.; Fisher, R.F.; Jones, T.; Komp, C.; Abola, A.P.; Barloy-Hubler, F.; Bowt; Kalman, S.; Keating, D.H.; Palm, C.; Peck, M.C.; Surzycki, R.; Wells, D.H.; Yeh, K.C. Proc. Natl. Acad. Sci. U.S.A. 91 A;Title: Nucleotide sequence and predicted functions of the entire Sinorhizobium melilor A;Reference number: A95262; MUID:21396509; PMID:11481432
A;Accession: G95367

C;Date: 24-Aug-2001 #sequence_revision 24-Aug-2001 #text_change 30-Sep-2001 C;Accession: G95367

A;Cross-references: GB:AE006469; PIDN:AAK65505.1; PID:g14523978; GSPDB:GN00165
A;Experimental source: strain 1021, megaplasmid pSymA
A;Experimental source: strain 1021, megaplasmid pSymA
R;Galibert, F.; Finan, T. M.; Long, S.R.; Puhler, A.; Abola, P.; Ampe, F.; Barloy-Hubler, P.; Pela, D.; Chain, P.; Cowie, A.; Davis, R.W.; Dreano, S.; Federspiel, N.A.; Fisher, R.F., pela, D.; Chain, P.; Cowie, A.; Davis, R.W.; Dreano, S.; Federspiel, N.A.; Fisher, R.F.,

A;Status: preliminary A;Molecule type: DNA A;Residues: 1-561 <KUR>

| 44 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | မ | 32 | 31 | 30 |
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| 33 | ω W | 33 | ω ω | 33 | ω W | 34 | <u>ب</u> | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 |
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| H82115 | T36264 | AH3486 | T11919 | E87679 | I51089 | T29227 | C84716 | H81982 | AB3640 | C69423 | G69429 | H65005 | G85874 | F91030 | AE0759 |
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| probable | pro | soluble lytic | ribosomal protein | chemotaxis protein | protamine - Japane | hypothetical | hypothetical | hypothetical | isoleucine-tRNA | DNA helicase homo | Glu-tRNA amidotrar | site-specific | probable | probable | CbiB protein [impo |

ALIGNMENTS

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probable methyl-accepting chemotaxis protein {imported] - Sinorhizobium meliloti (strair C;Species: Sinorhizobium meliloti
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A;Residues: 1-2351 <BEV>
A;Cross-references: GB:Z97338; NID:g2244870; PID:e327462; PID:g2244876
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Status: preliminary; nucleic acid sequence not shown; translation not shown
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| completed: June 9, 2003, 12:05:10 | 26 RISRVCHRWKRLVDDRWLWRHVDLTLYTVRALAGRAWAAV 65 | 19 RVVRVVRRWVRRVVRVVRWRVV 48 |
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TELEX: 248855 OPAT UR
INFORMATION FOR SEQ ID NO: :
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LENGTH: 2254 amino aci
                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/286,819
FILING DATE: 05-AUG-1994
APPLICATION NUMBER: US 08/174,682
FILING DATE: 28-DEC-1993
PRIOR APPLICATION DATA:
PRIOR APPLICATION TARGET.
                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE: protein
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                                                                                                    FILING DATE: 29-OCT-
PRIOR APPLICATION DATA:
                                                                                                                                                         APPLICATION NUMBER: 1
FILING DATE: 10-AUG-:
PRIOR APPLICATION DATA:
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                                                 ATTORNEY/AGENT INFORMATION:
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TITLE OF INVENTION:
TITLE OF INVENTION:
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 REFERENCE/DOCKET NUMBER:
           NAME: Oblon, No. 6013508man F.
REGISTRATION NUMBER: 24,618
                                                                      APPLICATION NUMBER: FILING DATE: 31-OCT
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                                                                                                                         APPLICATION NUMBER: PCT/FR/91/00855 FILING DATE: 29-OCT-1991
                                                                                                                                                                                                                                                                                                                         FILING DATE:
CLASSIFICATION: 435
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                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1607 WITCHNRODNMTAKSLSRLFRAVRSVVRYWETVPRLLARW 1646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9 WVRRVRRVWRRVVRVVRRWVRRVR---RVWRRVVRVVRRW 45
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12; Conserv
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1755 S. Jefferson Davis Highway, Suite 400
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                                                                        31-OCT-1990
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POLYPEPTIDES IMPLICATED IN THE EXPRESSION OF RESISTANCE TO GLYCOPEPTIDES, IN E IN GRAM-POSITIVE BACTERIA, NUCLEOTIDE SEQUENCE THESE POLYPEPTIDES AND USE FOR DIAGNOSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           54
                                                                                       FR 9013579
                                                                                                                                                                                              US 07/917,146
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660-060-0 PCT
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                                            US-08-905-223-416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Patent No. 6222029
GENERAL INFORMATION:
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              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                          TELEFAX: (619) 235-01
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                 NAME: Israelsen, Ned A.
REGISTRATION NUMBER: 29,655
REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
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CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy Disk
                                                                                                                                                                            MOLECULE TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
                                                                                                                                      FEATURE:
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                                                       NAME/KEY: sig_peptide
LOCATION: -63..-1
LOCATION: -63..-1
LIBRUTIFICATION METHOD: Von Heijne matrix
OTHER INFORMATION: score 4.8
OTHER INFORMATION: seq LYTVRALAGRAWA/AV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITY: San Diego
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
CLASSIFICATION:
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                                                                                                                                                 TISSUE TYPE:
                                                                                                                                                                    ORGANISM:
                                                                                                                                                                                                             TOPOLOGY: LINEAR
                                                                                                                                                                                                                                                                                                      TELEPHONE:
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                                                                                                                                                                                                                                            ENGTH:
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Similarity 30.0%;
12; Conservative
                                                                                                                                                                                                                          AMINO ACID
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248855 OPAT UR
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20.4%;
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Score 51; DB 4; Length 78; Pred. No. 16;
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Pred. No. 3.1e+02;
6; Mismatches 19
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Matches

16;

Conservative

3; Mismatches

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Indels

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Gaps

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US-09-199-637A-289
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                                                                          GENERAL INFORMATION:
                                                                                            Sequence 289, Application US/09199637A Patent No. 6355411
                                                                                                                                                                                                                                                                   Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 48
LENGTH: 2475
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                                APPLICANT:
                                             APPLICANT:
                                                             APPLICANT:
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NUMBER OF SEQ ID NOS: 107
                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Mueller, Joachim
APPLICANT: Reichenbach, Hans
TITLE OF INVENTION: DNA sequences for enzymatic synthesis of polyketide
TITLE OF INVENTION: heteropolyketide compounds
FILE REFERENCE: PCT/US 99/23535
CURRENT APPLICATION NUMBER: US/09/413,814
CURRENT FILING DATE: 1999-10-07
ERAPLIER APPLICATION NUMBER: DE 198 46 493.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Bristol-Myers Squibb,
                                                                                                                                                                                                                                                                                                                             ORGANISM: Sorangium cellulosum
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                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                     1802 VRRWRQALGELWRAGMPVAWERQRRGRHAGRRV 1834
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MOLECULE TYPE: peptide
SEQUENCE DESCRIPTION: SEQ ID NO:
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6225,
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Goldberg, Steven
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            Rahme, Laurence G.
Mahajan-Miklos, Shalina
                                           Goodman, Howard M.
                                                                                                                                                                                                                                                   Conservative
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Man-Wah
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                                                           Frederick
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Pred. No. 2.4e+02;
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Pred. No. 3.8;
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                                                                                                                                                                                                                                                                              Length 2475;
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; ORGANISM: Pseudomonas aeruginosa
US-09-199-637A-289
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LENGTH: 101
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER:
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                                                         PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/
FILING DATE: 29-OCT-1991
                                                                                                                                     CLASSIFICATION DATA:
PRIOR APPLICATION NUMBER: US 07/917,146
                                                                                                                                                                                                                          FILING DATE: 05-AUG-
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                            CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION:
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                                                                                                                                                                             FILING DATE: 28 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                               SOFTWARE:
                                                                                                               CLASSIFICATION:
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CLASSIFICATION:
                           APPLICATION NUMBER:
                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/08286819A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1755 S. Jefferson Davis Highway, Suite 400
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VERVION: POLYPEPTIDES IMPLICATED IN THE

VERVION: EXPRESSION OF RESISTANCE TO GLYCOPEPTIDES, IN PARTICUL

VERVION: IN GRAM-POSITIVE BACTERIA, NUCLECTIDE SEQUENCE CODING

VERVION: THESE POLYPEPTIDES AND USE FOR DIAGNOSIS
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                                                                                                                                                                                                                                                                                                                   PatentIn
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                                                                                                                              10-AUG-1992
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                             FR 9013579
                                                                            PCT/FR/91/00855
                                                                                                                                                                                                                                                                                                               Release #1.0,
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ATTORNEY/AGENT INFORMATION:

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; OTHER INFORMATION: Description of Artificial Sequence: Peptide
US-08-995-172-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PCT-US95-00062-9
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                                                                                                                                                                                                                                   Sequence 27, Application US/08839624 Patent No. 6225045
                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 1
LENGTH: 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                  -08-839-624-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/08/995,172B
CURRENT FILING DATE: 1997-12-22
EARLIER APPLICATION NUMBER: 60/033,908
EARLIER FILING DATE: 1996-12-23
                                                                                                                                                                                                   GENERAL INFORMATION:
APPLICANT: Karn e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS: 25
SOFTWARE: PatentIn Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: Optimization of Gene Delivery and Gene Delivery Systems FILE REFERENCE: CACO0026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Thatcher, David R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  equence 1, Application US/08995172B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: (515) 248-4844 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 31 amino acids
TYPE: amino acid
                                                                                                                              APPLICANT: Karn et al.
TITLE OF INVENTION: METH
TITLE OF INVENTION: HUY
TITLE OF SEQUENCES: 43
CORRESPONDENCE ADDRESS:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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TELEPHONE: (515) 248-4800
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                                                                                                    STREET:
                                                  COUNTRY:
                                                                                                                     ADDRESSEE:
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                                                                                  Boston
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                                                                   Massachusetts
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                                                                                                                 Banner & Witcoff, Inc.
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                                                                                                                                                                  METHODS AND COMPOSITIONS FOR COMBATTING HIV INFECTION
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Pred. No. 3.8;
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Pred. No. 1.1;
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RESULT 10
US-09-150-812-27
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Best Local S
Matches 13
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GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: PCT/GB96
PILING DATE: 15-APR-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/01
PILING DATE: 13-MAY-1996
ATTORNEY/AGENT INFORMATION:
NAME: Kathleen M. Williams
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER: 32
TELECOMMUNICATION INFORMATION:
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                                                                                                                                                                       CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/150,812
FILING DATE: 11-Sep-1998
CLASSIFICATION: -Unknown>
                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                            PRIOR APPLICATION DATA
REFERENCE/DOCKET NUMBER: 3255/5390 TELECOMMUNICATION INFORMATION:
                                                                     ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR COMBATTING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Karn et al.
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                                                                                  APPLICATION NUMBER: 08/839,624
FILING DATE: «Unknown»
APPLICATION NUMBER: US 60/017,268
FILING DATE: 13-MAY-1996
                               NAME: Kathleen M. Williams
REGISTRATION NUMBER: 34,380
                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                              STATE: Massachusetts
                                                                                                                                                                                                                                                  SOFTWARE: WordPerfect 6.1
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                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: Banner & Witcoff, Inc
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April 15, 1997
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Pred. No. 3.8;
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RESULT 6
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                                                                 Sequence 9, Applion Patent No. 571706:
                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                           Query Match
Best Local 9
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Best Local Similarity
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                                                   GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION UMBER: 08/079,512
PILING DATE: 06/18/93
PILING DATE: 10FORMATION:
ANDERSY/AGENT INFORMATION:
APPLICANT: Rao, Gururaj A.
APPLICANT: Zhong, Lingxiu
TITLE OF INVENTION: SYNTHETIC ANTIMICROBIAL PEPTIDES
                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 31 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM Compatible
OPERATING SYSTEM: MS-DOS/Microsoft Windows
SOFTWARE: Microsoft Windows No. 5607914epad
CURRENT APPLICATION DATA:
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MEDIUM TYPE: Diskett
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Roth, Michael J. REGISTRATION NUMBER: 29,342
                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 07-JAN-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY: UZIP: 50309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     594 RRARHRARRAPRRVRRLVGRRLRRRARRALRRL 626
                                                                                                                                                                                                       11 RRVRRVWRRVVRVVRRWVRRVVRVVRV 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7 RRWVRRVRRVWRRVVRVV-RRWVRRVRRVWRRV 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Des Moines
                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                        amino acids
                                                                                   Application US/08440174A
                                                                                                                                                                      RRIYRAIRHIPRRIRGW---LRRIGRRIERV 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Iowa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            E: Pioneer Hi-Bred International, Inc. 700 Capital Square, 400 Locust Street
                                                                                                                                                                                                                                           Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (515) 245-3594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Diskette,
                                                                                                                                                                                                                                                                                                                                                         single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A. Gururaj; Zhong, Lingxiu
ON: SYNTHETIC ANTIMICROBIAL PEPTIDES
                                                                                                                                                                                                                                                       23.4%;
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                                                                                                                                                                                                                                         6; Mismatches
                                                                                                                                                                                                                                                         Score 58.5; DI
Pred. No. 1.1;
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Pred. No. 18
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GENERAL INFORMATION:
APPLICANT: Pioneer Hi-Bred Intern
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 12-MAY-1995
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/
FILING DATE: 18-JUN-1993
ATTORNEY/AGENT INFORMATION:
NAME: BODITOWICZ, DONNA
REGISTRATION NUMBER: 32,19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (515) 334-6883
INFORMATION FOR SEQ ID NO: 9:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                        SOFTWARE: Microsoft Windows Notepad CURRENT APPLICATION DATA:
ATTORNEY/AGENT INFORMATION:
NAME: Yates, Michael E.; Sweeney, Patricia A.;
NAME: Roth, Michael J.; & Simon, Soma G.
                                                                                                 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER: 02
TELECOMMUNICATION INFORMATION:
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MEDIUM TYPE: Floppy
COMPUTER: IBM PC com
                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
ADDRESSEE: Pioneer Hi-Bred International, Inc.
STREET: 700 Capital Square, 400 Locust Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: protein
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ADDRESSEE: PIONEER HI-BRED INTERNATIONAL, INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                             FITLE OF INVENTION:
                                                                                                                   FILING DATE: CLASSIFICATION:
                                                                                                                                                                                                                             MEDIUM TYPE: Diskette, 3 COMPUTER: IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                            FILING DATE:
                                                                                                                                                      APPLICATION NUMBER: PCT/US95/00062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
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                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                             OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                               CITY: Des Moines
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ENGTH:
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                                                                                                                                                                                                                                                                                          50309
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PENTION: SYNTHETIC ANTIMICROBIAL PEPTIDES
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                                                                                                                                                                                                             MS-DOS/Microsoft Windows
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Pred. No. 1.1;
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NUMBER OF SEQUENCES: 1

ADDRESSEE:

TITLE OF INVENTION:

WEIGHT HEPARIN
ANTICOAGULATION REVERSAL

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Best Local Similarity
                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: 313-965-1951 INFORMATION FOR SEQ ID NO:
                                                                                TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                      tent No. 591976:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION UNMBER: N/A
FILING DATE: N/A
ATTORNEY/AGENT INFORMATION:
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SOFTWARE: ASCII (DOS) Text
SOFTWARE: ASCII (DOS) Text
CURRENT APPLICATION DATA:
CURRENT APPLICATION UNMBER: US/08/436,703B
                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PUBLICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
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MEDIUM TYPE: Floppy disk 1.44Mb, 3.5"
                                             CORRESPONDENCE ADDRESS:
                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS: N,
TITLE: N/A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Rohm, Benita J.
REGISTRATION NUMBER: 28,664
REFERENCE/DOCKET NUMBER: 7WK-060548-00233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: FILING DATE: 08-MA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: 6601 Woodw
STREET: Suite 1525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM:
 STREET:
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                               DDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                    7 RRWVRRVRRVWRRVVRVVRWVRRVVRVVRVVR 43
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                                                                                                                                                                                                                                    Application US/08436703B
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Suite 1525
               6601 Woodward Avenue
                                                                                                Stanley, James C.
VENTION: NOVEL PEPTIDES FOR
VENTION: HEPARIN AND LOW MOLECULAR
VENTION: WEIGHT HEPARIN
                                                                                                                                                                 Andrews,
                                                                                                                                                                                     Wakefield, Thomas W.
                                                                                                                                                                                                                                                                                                                                                                                        Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                    24.48;
                                                                                                                                                                 Philip C.
                                                                                ANTICOAGULATION REVERSAL
                             Rohm, Esq.
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    Mismatches

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                                                                                                                                                                                                                                                                                                                                                                                      14; Indels
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               SEQ ID NO 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                             CURRENT APPLICATION NUMBER: US/09/413,814
CURRENT FILING DATE: 1999-10-07
EARLIER APPLICATION NUMBER: DE 198 46 493.2
EARLIER FILING DATE: 1998-10-09
NUMBER OF SEQ ID NOS: 107
SOFTWARE: Patentin Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                   atent No.
                                                                                                                          APPLICANT: Mueller, Joachim
APPLICANT: Reichenbach, Hans
TITLE OF INVENTION: bNA sequences for enzymatic synthesis of polyketide or
TITLE OF INVENTION: heteropolyketide compounds
FILE REPERENCE: PCT/US 99/23535
                                                                                                                                                                                                               APPLICANT: Dougherty, Brian A
APPLICANT: Goldberg, Steven L
APPLICANT: Hofle, Gerhard
                                                                                                                                                                                                                                                                                                                               APPLICANT: Gesellschaft fuer Biotechnologische Forschung mbH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: 313-965-1951
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                    PPLICANT:
                                                                                                                                                                                                                                                                                                  APPLICANT: Bloecker,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PUBLICATION INFORMATION:
"""HORS: N/A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
LENGTH: 39 amino acids
TYPE: amino acid
STRANDEDNESS: N/A
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APPLICATION NUMBER: N/A
FILING DATE: N/A
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CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy
ENGTH: 882
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ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION: NAME: Rohm, Benita J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION: TELEPHONE: 313-965-1976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS: N/A
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ZIP: 482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Rohm, Benita J.
REGISTRATION NUMBER: 28,664
REFERENCE/DOCKET NUMBER: 7W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: FILING DATE: 08-MAN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                  INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                   78,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18 RRVVRVVRRWVRRVRRVWRRVVRVVRRWR 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 Similarity
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                                                                                                                                                                                                                                                                   Cino,
                                                                                                                                                                                                                                                                                  Brandt,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RRAARRARRAARRAARRAARRAR 31
                                                                                                                                                                                                                                                                                                                                                                                                   Application US/09413814
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                                                                                                                                                                                                                                                                     Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08-MAY-1995
                                                                                                                                                                                                                                                                                                                   Stefan
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                                                                                                                                                                                                                                                                                  Petra
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Pred. No.
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0.92;
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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BLOSUM62
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-079-075-12
250
                                                                                                                                                                                                                                                                                                                                                                                                                                 262574 seqs, 29422922 residues
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Issued_Patents_AA:*

1: /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*

2: /cgn2_6/ptodata/1/iaa/5B_COMB.pep:*

3: /cgn2_6/ptodata/1/iaa/6A_COMB.pep:*

4: /cgn2_6/ptodata/1/iaa/6B_COMB.pep:*

5: /cgn2_6/ptodata/1/iaa/backfiles1.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9, 2003, 11:50:31; Search time 16.3404 Seconds (without alignments) 86.430 Million cell updates/sec
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| 27 | 26 | 25 | 24 | . 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 80 | 7 | თ | _U | 4 | ω | N | | Result No. |
|-----------------|----------|-------------------|--------------------|--------|------------------|------------------|------------------|-------|-------------------|------|------------------|-------------------|------------------|------|--------------------|----------|-------|--------------|-----------------|------------------|------------------|-----------------|------------------|------------------|-------------------|-------------------|-----------------------|
| 49.5 | | 50 | 50 | 50.5 | 50.5 | 50.5 | 50.5 | 50.5 | 50.5 | 50.5 | 15 | 51 | 51.5 | 51.5 | 51.5 | 53 | 53.5 | 53.5 | 53.5 | 8 | 58.5 | 58.5 | 59.5 | | 61 | 77 | Score |
| 19.8 | 19.8 | 20.0 | 20.0 | 20.2 | 0 | | | | 20.2 | ٥. | | 20.4 | 20.6 | 20.6 | 20.6 | 21.2 | 21.4 | 21.4 | 21.4 | 23.4 | 23.4 | 23.4 | 23.8 | 24.0 | 24.4 | 30.8 | Query Match Length |
| 525 | 525 | 28 | 28 | 3118 | 355 | 240 | 240 | 240 | 240 | 16 | 2618 | 78 | 2254 | 2254 | 101 | 2475 | 31 | 31 | 31 | 31 | 31 | 31 | 882 | 39 | 38 | 770 | 1 |
| Ν | ш | Ŋ | Н | 4. | N | 4 | w | N | ب | w | 4 | 4 | w | N | 4 | 4 | 4 | 4 | 4. | ហ | ۲ | Н | 4 | N | N | 4, | - B |
| US-08-905-817-2 | -08-348- | US-08-932-682-160 | US-08-786-748A-160 | 181 | US-08-846-762-93 | US-09-527-657-10 | US-09-253-682-10 | | US-08-414-926A-10 | | US-09-413-814-28 | US-08-905-223-416 | US-08-980-357-28 | 81 | US-09-199-637A-289 | 9-413-81 | 812- | -08-839-624- | US-08-995-172-1 | PCT-US95-00062-9 | US-08-440-174A-9 | US-08-179-632-9 | US-09-413-814-78 | US-08-436-703B-5 | US-08-436-703B-17 | US-09-245-248B-31 | ID |
| ,2 | O | e 16(| e 160 | e 1, 2 | 93, | e 10, | 10, | e 10, | | 9, | 28, 7 | 416, | e 28, | | e 289, | e 48, | e 27, | e 27, | e 1, | e 9, | O | e 9 | e 78, | | e 17, | Sequence 31, Appl | Description |

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| 3 US-08-33-33-33-33-33-33-33-33-33-33-33-33-33 |
| US-08-93-674A-33 US-08-93-674A-33 US-09-93-674A-33 US-09-199-637A-107 US-09-199-637A-107 US-09-036-987A-4 US-08-786-748A-39 US-08-786-748A-39 US-08-786-748A-39 US-08-932-682-39 US-08-932-682-39 US-09-082-358B-49 US-09-082-358B-49 US-09-09-631A-12 US-09-420-592A-9 US-09-420-592A-9 US-09-420-592A-11 US-09-427-001C-23 |
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ALIGNMENTS

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; SOFTWARE: FastSEQ for W
; SEQ ID NO 31
; LENGTH: 770
; TYPE: PRT
; ORGANISM: Homo sapien
US-09-245-248B-31
                                                                                         US-08-436-703B-17; Sequence 17, Application US/08436703B; Patent No. 5919761
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Matches 22; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 31,
                                                                            GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE: 6461.US.O1
CURRENT APPLICATION NUMBER: US/09/245,248B
CURRENT FILING DATE: 1999-02-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
APPLICANT: Stanley, James C.
TITLE OF INVENTION: NOVEL PEPTIDES FOR
TITLE OF INVENTION: HEPARIN AND LOW MOLECULAR
                               APPLICANT: Wakefield, Thomas W. APPLICANT: Andrews, Philip C. APPLICANT: Stanley, James C.
                                                                                                                                                                                            41 -VVRRWR 46
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70 IIIRQWQ 76
                                                                                                                                                                                                                                                             11 RRWRRWRRPWRRRWRTRRRRPARRRGRRRNVRRRRRGGRWRRRYRR-WKRKGRRRKKAK 69
                                                                                                                                                                                                                                                                                         7 RRWVRRVRRVWRRVVRVVR----
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Muerhoff, Scott
Pilot-Matias, Tami
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Desai, Suresh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Simons, John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chalmers,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Erker, James
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                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              METHODS OF UTILIZING THE TT VIRUS
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                                                                                                                                                                                                                                                                                                                                      30.8%;
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                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                          12;
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Persing, David

APPLICANT: Persing, David

APPLICANT: Bhatia, Ajay

APPLICANT: Maisonneuve, Jean Francois

APPLICANT: Wang, Siqing

APPLICANT: Wang, Siqing

APPLICANT: Lodes, Michael

APPLICANT: Jones, Robert

APPLICANT: Jones, Robert

APPLICANT: Jones, Robert

APPLICANT: Barth, Brenda

APPLICANT: Barth, Brenda

APPLICANT: Dauglass, John

TITLE OF INVENTION: Compositions and Methods for the Therapy and Diagnosis of APPLICANT: Douglass, John

TITLE OF INVENTION UNMERS: PCT/US02/32727

CURRENT APPLICATION UNMERS: PCT/US02/32727

CURRENT FILING DATE: 2002-10-11

NUMBER OF SEQ ID NOS: 30992

SEQ ID NO 24220

LENGTH: 96

TYPE: ppm
Search completed: June 9, 2003, 12:31:39 Job time : 62.1277 secs
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PCT-US02-32727-24220
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                                                                                                                                                                                                  ; TYPE: PRT
; ORGANISM: Propioni acnes
PCT-US02-32727-24220
                                                                                                                                Query Match 26.6%;
Best Local Similarity 45.2%;
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                   15 RVWRRVVRVVRRWVRRV-RRVWRRVVRVVRR 44
                                                                11 RCWRRVSNTRRPWAAKLCSRTWRRTESLVRR 41
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                                                                                                                                 3; Mismatches
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                                                                                                                                                               DB 1; Length 96;
                                                                                                                                 13; Indels
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PCT-US02-32727-26771
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Best Local S
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SEQ ID NO 52367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 52367, Application US/10425114
                                                                                                                                                               SEQ ID NO 26771
LENGTH: 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: Clone ID: LIB4073-017-F8_FLI.pep-10-425-114-52367
Best Local Similarity
                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Kovalic, David K.
APPLICANT: Screen, Steven E
APPLICANT: Tabaska, Jack E
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules ar
TITLE OF INVENTION: Plants and Uses Thereof
FILE REFERENCE: 38-21 (53313) B
                                                                                                                                                                                          CURRENT APPLICATION NUMBER: PCT/US02/32727
CURRENT FILING DATE: 2002-10-11
NUMBER OF SEQ ID NOS: 30992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/10/425,114
CURRENT FILING DATE: 2003-04-28
                                                                                                                                                                                                                                                FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Liu, Jingdong
                                                          NAME/KEY: unsure
LOCATION: (10)
OTHER INFORMATION: Xaa = Any Amino Acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Zea mays FEATURE:
                                                                                                                            ORGANISM: Propioni acnes
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                                                                                                                                                                                                                                                         PLICANT: Douglass, John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mitcham, Jennifer
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                                                                                                                                                                                                                                                                                                                                                                              Zhang, included signing
                                                                                                                                                                                                                                                                                          Jones, Robert
Carter, Darrick
Barth, Brenda
                                                                                                                                                                                                                                                                                                                                      Lodes, Michael
Benson, Darin
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Bhatia, Ajay
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          David
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   26.6%;
47.1%;
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Pred. No. 32;
   Score 66.5;
Pred. No. 20;
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                  DB 1;
                                                                                                                                                                                                                                                              for the Therapy and Diagnosis of Acnes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 139;
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Best Local S
Matches 16
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                    Query Match
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                                                                                                                                                  TYPE: PRT
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; PEATURE:
; NAME/KEY: unsure
; LOCATION: (10)
; OTHER INFORMATION: Xaa = Any Amino Acid
US-09-978-825-26771
                                                                                                                                                                                                                                                                                                                                                            US-10-057-498-26771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS: 30992
SEQ ID NO 26771
LENGTH: 53
TYPE: PRT
                                                NAME/KEY: unsure
LOCATION: (10)
OTHER INFORMATION: 3
5-10-057-498-26771
                                                                                                                                                                           SEQ ID NO 26771
                                                                                                                                                                                                                                                                                                                       Sequence 26771, Appl GENERAL INFORMATION:
Best Local Similarity
                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/10/057,498
CURRENT FILING DATE: 2001-04-20
NUMBER OF SEQ ID NOS: 29212
                                                                                                                                                                                                                                                         APPLICANT: Mitcham, Jennifer
APPLICANT: Skeiky, Yasir
APPLICANT: Persing, David
TITLE OF INVENTION: Compositions and Methods
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT FILING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Mitcham, Jennifer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Propioni
                                                                                                                            ORGANISM: Propioni
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TREENT APPLICATION NUMBER: US/09/978,825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ITLE OF INVENTION: Compositions and Methods for the Therapy and Diagnosis of Acnes
                                                                                                                                                                                                                                              LE REFERENCE: 210121.51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16;
                                                                                                                                                                                                                                                                                                                                                                                                                          3 RVFMRWLXVVMRCWFRLVLV---WVRVFRIRILW
                                                                                                                                                                                                                                                                                                                                                                                                                                                        4 RVVRRWVRRVRRVWRRVVR--RVRRVW 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
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Barth, Brenda
Douglass, John
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Jones, Robert
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Pred. No. 20;
 Score 66.5;
Pred. No. 20;
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                                                                                                                                                                                                                                             Sequence 68594, Application US/10425114
GENERAL INFORMATION:
APPLICANT: Liu, Jingdong
NUMBER OF SEQ ID NOS: 73128
SEQ ID NO 68594
LENGTH: 342
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LENGTH: 252
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Best Local Similarity
                                                      APPLICANT: Zhou, Yihua
APPLICANT: Kovalic, David K.
APPLICANT: Screen, Steven E
APPLICANT: Screen, Steven E
APPLICANT: Tabaska, Jack E
APPLICANT: Tabaska, Jack E
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21 (53313)8
CURRENT PILING DATE: 2003-04-28
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CURRENT APPLICATION NUMBER: US/10/425,114
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 73128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Tabaska, Jack E
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
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les 26; Conserv
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Pred. No. 12;
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; FEATURE:
; OTHER INFORMATION: Clone ID: LIB3591-091-B12_FLI.pep
US-10-425-114-58367
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                                                                        ; ORGANISM: Homo sapiens
US-60-452-680-16830
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                                                                                                                                               CURRENT APPLICATION NUMBER: US/60/452,680
CURRENT FILING DATE: 2003-03-07
NUMBER OF SEQ ID NOS: 116213
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 16830
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CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 73128
SEQ ID NO 58367
LENGTH: 129
TYPE: PRT
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                 Query Match
Best Local Similarity
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Best Local Similarity
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APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(53313)B
FILE REFERENCE: 18-21(53313)B
                                                                                                                                                                                                                                           APPLICANT: CARGILL, Michele
APPLICANT: GRUPE, Andrew
TITLE OF INVENTION: GENETIC POLYMORPHISMS ASSOCIATED WITH
TITLE OF INVENTION: ALZHEMER'S DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CL001450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Liu, Jingdong APPLICANT: Zhou, Yihua APPLICANT: Kovalic, Dav
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                                                                                                             TYPE: PRT
                                                                                                                                 LENGTH: 142
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Screen, Steven E
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                 Score 71;
Pred. No.
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Pred. No.
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Pred. No. 15;
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                 DB 7; Length 142; 17;
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US-10-425-114-66861
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SOFTWARE: PatentIn Ver.
SEQ ID NO 2376
LENGTH: 136
                                                                           SEQ ID NO 70810
LENGTH: 190
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GENERAL INFORMATION:
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                                                                                                            CURRENT APPLICATION NUMBER: US/10/425,114
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 73128
                                                                                                                                                                   APPLICANT: Kovalic, David K.
APPLICANT: Screen, Steven E
APPLICANT: Tabaska, Jack E
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REPERENCE: 38-21(53313)B
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PRIOR FILING DATE: 2001-05-18
PRIOR APPLICATION NUMBER: US 60/205,515
PRIOR FILING DATE: 2000-05-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE: PA131P1
CURRENT APPLICATION NUMBER: US/10/264,237
CURRENT FILING DATE: 2002-10-04
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TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies
                                                                                                                                                                                                                                                                                                                                          ENERAL INFORMATION:
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ORGANISM: Homo sapiens
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ORGANISM: Zea mays
OTHER INFORMATION: Clone ID: UC-ZMFLMO17240G10_FLI.pep
                       RGANISM: Zea mays
EATURE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
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Pred. No. 8.9;
1; Mismatches
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SEQ ID NO 68513
LENGTH: 195
TYPE: PRT
ORGANISM: Zea mays
FEATURE:
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                                                                   NUMBER OF SEQ ID NOS:
SEQ ID NO 68542
                                                                                                                                                                                                                                                                                                                    Sequence 68542, Application US/10425114
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Best Local
                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Liu, Jingdong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/10/425,114
CURRENT FILING DATE: 2003-04-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Tabas
                                                                                                     APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38 e21 (53313) B
CURRENT APPLICATION NUMBER: US/10/425,114
CURRENT FILING DATE: 2003-04-28
                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILE REFERENCE: 38-21(53313)B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Liu, Jingdong
ORGANISM: Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION: Clone ID: UC-ZMFLMO17297F07_FLI.pep
                                                     ENGTH:
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                                                                                                                                                                                                                                                                                                                                                                                                            132 RWR 134
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Screen, Steven E
Tabaska, Jack E
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Screen, Steven E
Tabaska, Jack E
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 --VRRVRRVWRRVVRVVRRWVRR-----VRRVWRRVVRVVR 43
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Minimum DB
Maximum DB
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Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scoring table: '
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    score greater than or equal and is derived by analysis of
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   seq length: 0
seq length: 2000000000
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250
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  1046584 seqs, 225093350 residues
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/cgn2_6/ptodata/1/paa
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Copyright (c) 1993 - 2003 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                           /cgn2_6/ptodata/1/paa/PCT_NEW_COMB.pep:*
/cgn2_6/ptodata/1/paa/US06_NEW_COMB.pep:*
/cgn2_6/ptodata/1/paa/US07_NEW_COMB.pep:*
/cgn2_6/ptodata/1/paa/US08_NEW_COMB.pep:*
/cgn2_6/ptodata/1/paa/US09_NEW_COMB.pep:*
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PCT-USO2-32727-24220
US-09-978-825-24220
US-10-657-498-24220
US-10-425-114-36902
US-10-425-114-36905
US-10-425-114-39050
US-10-219-0518-8229
US-10-219-0518-8229
PCT-USO2-32727-20271
PCT-USO2-32727-25676
US-09-978-825-25676
US-09-978-825-25676
US-09-978-825-25676
                                                                                                                    US-10-425-114-70663
US-10-425-114-68961
US-10-264-237-2376
US-10-425-114-68513
US-10-425-114-68542
US-10-425-114-68594
US-10-425-114-68594
US-10-425-114-58367
US-10-425-114-58367
US-10-425-114-58367
US-60-452-680-16830
US-10-425-114-52367
US-60-978-825-26771
US-09-978-825-26771
US-09-978-825-26771
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Sequence 68542, 1
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                                       24220,
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58367,
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| 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | ω 5 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 |
|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|----------------------|----------------------|---------------------|----------------------|
| 62 | 62 | 62.5 | 62.5 | 62.5 | 62.5 | 62.5 | 63 | 63 | 63 | 63 | 63.5 | 63.5 | 63.5 | 64 | 64 | 4. | 64.5 | 64.5 |
| | | 25.0 | | | 25.0 | | | | | | | | | | | | | |
| . 66 | 66 | 205 | 205 | 193 | 189 | 189 | 957 | 296 | 107 | 107 | 396 | 288 | 66 | 692 | 181 | 360 | 152 | 53 |
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| US-09-978-825-12229 | PCT-US02-32727-12229 | US-10-419-128-32538 | US-10-366-683-32538 | US-10-425-114-54263 | US-10-419-128-24576 | US-10-366-683-24576 | US-10-282-122A-64361 | US-10-425-114-71457 | US-10-425-114-56955 | US-10-425-114-53360 | US-10-425-114-56117 | US-10-369-493-17910 | US-10-203-138A-10862 | US-10-156-761-12598 | US-10-424-599-208445 | US-10-282-122A-49117 | US-10-425-114-54667 | ·US-10-057-498-25676 |
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| 12229, | 12229, | 32538, | 32538, | 54263, | 24576, | 24576, | 64361, | 71457, | 56955, | 53360, | 56117, | 17910, | 10862, | 12598, | 208445 | 49117, | 54667, | 25676, |
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ALIGNMENTS

US-10-425-114-70663

Sequence 70663, Application US/10425114 GENERAL INFORMATION:

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Best Local S
Matches 23
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LENGTH: 245
TYPE: PRT
                                                                                                                APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Liu, Jingdong
APPLICANT: Zhou, Yihua
APPLICANT: Kovalic, David K.
APPLICANT: Kovalic, David K.
APPLICANT: Screen, Steven E
APPLICANT: Tabaska, Jack E
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(53313)B
CURRENT FILLING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 73128
              TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement FILE REFERENCE: 38-21(53313)B CURRENT APPLICATION NUMBER: US/10/425,114
CURRENT FILING DATE: 2003-04-28
                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                         APPLICANT: Liu, Jingdong
NUMBER OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Zea mays FEATURE:
                                                                                                                                                                                                                                                                                                                                                  12 RWVRKLRRWRRRWWWWWW.-RRRRRWVR-----RRWRL 45
                                                                                                                                                                                                                                                                                                                                                                                                                               23;
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SEQ ID NOS: 73128
                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                            Zhou, Yihua
Kovalic, David K.
Screen, Steven E
Tabaska, Jack E
Cao, Yongwei
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Sequence 8, Application PC/TUS0204812

INFORMATION:

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RESULT 14
US-09-785-059-8
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US-09-785-058-8
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US-09-785-058-8
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                                                                                                                                                                                                       Sequence 8, Application US/09785059
GENERAL INFORMATION:
APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 12
SOPTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 8, Applicat GENERAL INFORMATION:
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SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 8
LENGTH: 48
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Best Local
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                                                                              SEQ ID NO 8
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CURRENT FILING DATE: 2002-02-19
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-PCT / 072396,0223
                                                                                             NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                  APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne
FEATURE:
                   LENGTH: 48
TYPE: PRT
ORGANISM: Artifical sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
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ORGANISM: Artifical sequence
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Pred. No. 6.7e-12;
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Pred. No. 6.7e-12;
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                                                                                                                                                                                  US-10-079-075-8
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 8
LENGTH: 48
TYPE: PRT
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Best Local Similarity
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CURRENT FILING DATE: 2002-02-19
                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A34001-A / 072396,0222
                                                                                                                                                                                                 OTHER INFORMATION: Artificial peptide derived from HIV-1
                                                                                                                                                                                                               FEATURE:
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Pred. No. 6.7e-12;
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Pred. No. 6.7e-12;
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RESULT 9
US-09-785-059-11
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                                                       CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ TD NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 11
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 11
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SEQ ID NO 11
LENGTH: 36
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Best Local S
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396,0217
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CURRENT FILING DATE: 2001-02-16
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIEWS DERIVED ANTIMICROBIAL
FILE REFERENCE: A 34001 / 072396.0222
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APPLICANT: Timothy A. Mietzne
TITLE OF INVENTION: VIUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-PCT / 072396.0223
CURRENT APPLICATION NUMBER: PCT/US02/04812
CURRENT APPLICATE: 2002-02-19
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
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ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
ORGANISM: Artifical sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: Artificial peptide derived from HIV-1
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                                         ENGTH: 36
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Pred. No. 1.1e-12;
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Pred. No.
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                                                                                                                     ; OTHER INFORMATION: Artificial PCT-US02-04432-8
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US-10-079-075-11
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SEQ ID NO 11
LENGTH: 36
TYPE: PRT
ORGANISM: Artificial Sequence
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                                                          Matches
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Best Local Similarity
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Best Local Similarity
Matches 33; Conserv
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Best Local Similarity
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A34001-PCT / 072396.0223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILLING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
                                                                                                                                                              LENGTH: 48
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                   FEATURE:
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Pred. No. 1.1e-
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Pred. No. 1.1e-1
                                                                         Score 170; DB 1; Length 48 Pred. No. 6.7e-12;
                                                                                                                                  peptide derived from HIV-1
                                                          Mismatches
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RESULT 12 PCT-US02-04812-8

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CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
SOPTWARE: PastSEQ for Windows Version 3.0
SEQ ID NO 12
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Best Local Similarity
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APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
FURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILLING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID/WO 12
LEVOTH: 48
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CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A34001-PCT / 072396,0223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILE REFERENCE: A 34001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Ronald C. APPLICANT: Timothy 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
OTHER INFORMATION: artificial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Artifical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PPLICANT: Timothy A. Mietzner
PPLICANT: Timothy A. Mietzner
ITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
TIE PEFERENCE: A 34001 / 072396.0222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION: artificial peptides derived from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   48;
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                                                                                                                                                                                                                                                                                          Application US/09785058
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Pred. No. 6.4e-21;
                                                                                                                                                                                                                                                                                                                                                        Score 250; DB 21;
Pred. No. 6.4e-21;
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                                                                                                             PCT-US02-04432-11
                                                                                                                                                                   SEQ ID NO 11
LENGTH: 36
TYPE: PRT
                                                                                                                                                                                                                                                                                                                       Sequence 11, Application PC/TUS0204432 GENERAL INFORMATION:
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                                                      Matches
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Best Local Similarity
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Best Local Similarity
                                                                                 Query Match
                                                                                                                                                                                                                       APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-PCT / 072396.0223
CURRENT APPLICATION NUMBER: PCT/US02/04432
CURRENT FILING DATE: 2002-02-13
NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                                                                                                                                                APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT FILING DATE:
NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/10/079,075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A34001-A / 072396.0222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne.
                                                                                                                                                                                                             SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
ORGANISM: Artificial Sequence
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                                                                                                                          OTHER INFORMATION:
                                                                                                                                                      ORGANISM: Artificial
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                                                                     Local
                          13 VRRVWRRVVRVVRRWVRRVVRRVVRRW 45
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                                                                                                                          Artificial peptide derived
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                                                                                                                                                      Sequence
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                                                                     Score 176;
Pred. No.
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Pred. No. 6.4e-21;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
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                                                                     1.1e-12;
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                                                                               Length 36;
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RESULT 7



GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

Run on: June 9, 2003, 11:55:47; Search time 207.83 Seconds (without alignments) 148.906 Million cell updates/sec

Sequence: Perfect score: US-10-079-075-12
250
1 RVVRVVRRWVRRVRRVWRRV......RRVRRVWRRVVRVVRVWRWRVV 48

Scoring table: BLOSUM62 Gapop 10.0 , Gapext 0.5

Searched: 4569144 seqs, 644733110 residues

Total number of hits satisfying chosen parameters: 4569144

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database : n2_6/ptodata/1/paa/US080_COMB.pep:*
n2_6/ptodata/1/paa/US081_COMB.pep:*
n2_6/ptodata/1/paa/US081_COMB.pep:*
n2_6/ptodata/1/paa/US083_COMB.pep:*
n2_6/ptodata/1/paa/US084_COMB.pep:*
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gn2_6/ptodata/1/paa/US096_COMB.pep:*
gn2_6/ptodata/1/paa/US096_COMB.pep:* /paa/PCTUS_COMB.pep: COMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| თ | _U | 4 | ω | 2 | , | Result No. |
|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------------------|
| 176 | 250 | 250 | 250 | 250 | 250 | Score |
| 70.4 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | Query Match Length DB ID |
| 36 | 48 | 48 | 48 | 48 | 48 | ength D |
| ۲ | 24 | 21 | 21 | _ | | ₩ |
| PCT-US02-04432-11 | US-10-079-075-12 | US-09-785-059-12 | US-09-785-058-12 | PCT-US02-04812-12 | PCT-US02-04432-12 | ID |
| Sequence 11, Appl | Sequence 12, Appl | Description |

| 5 | | , i | | 4 C | 4 | 6 | | 38 | 37 | 36 | 35 | 34 | ယ | 32 | ω H | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | <u>1</u> 5 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 |
|----------------------|-------------|-------------------|-------------|-----------|-------------|--------|--------------|-----------------|----------|-----------------|-------|------------------|------|---------------------|--------------|----------|-----------------|------------|--------------|--------------|-------------------|--------------|--------------|-------------------|-------------------|---------|--------|--------------|------------|-------------|-------------|---------|-----------------|--------------|-------------|-------|---------------|--------------|-------------------|
| 7. | | ١, | 0 0 | 000 | 0 0 | 9 | 88 | 97 | 97 | 97 | 97 | 97 | 98.5 | 98.5 | 98.5 | 123 | 123 | 123 | 123 | 123 | 130 | 130 | 130 | 130 | 130 | 144 | 144 | 144 | 144 | 144 | 170 | 170 | 170 | 170 | 170 | 176 | 176 | 176 | 176 |
| . " | ٠. | ٠. | ٦. | э I | ٦. | ַ י | 5 | 8 | 8 | 8 | 8 | 8 | 9 | 9. | 39.4 | 9. | 9. | 49.2 | 49.2 | | Ν. | ٧ | ۲. | | 2 | .7 | .7 | 7 | .7 | 7. | ω. | 8 | 68.0 | | œ | 70.4 | 0 | 70.4 | 70.4 |
| . 82 | , (| 1 A |) (| 2 4 |) N | 24 | 24 | 31 | 31 | 31 | 31 | 31 | 133 | 133 | 133 | 36 | 36 | 36 | 36 | 36 | 24 | 24 | 24 | 24 | 24 | 42 | 42 | 42 | 42 | 42 | 4 8 | 48 | 48 | | | | 36 | 36 | 36 |
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| US-09-513-996A-34302 | | -00-613-8963-6430 | 2000 | -09-75 | 000706-050- | 04812- | -US02-04432- | US-10-079-075-3 | 785-059- | US-09-785-058-3 | 4812- | PCT-US02-04432-3 | | US-60-191-637-10778 | -09-614-150- | -10-079- | US-09-785-059-6 | 09-785-058 | -US02-04812- | -US02-04432- | 10-079- | -09-785-059- | -09-785-058- | US02-04812- | PCT-US02-04432-10 | 10-079- | 9-785- | -09-785-058- | -US02-0481 | US02-04432- | 10-079-075- | • | US-09-785-058-8 | -US02-04812- | US02-04432- | 075- | -09-785~059-1 | -09-785-058- | PCT-US02-04812-11 |
| Sequence 34302, A | eduction of |) (I | officers of | equence 5 | η - | n . | 5. Appli | w - | 3, Appl | e 3, Appl | · | 3, Appl | 9 | e 10778, | 10 | ς, | е 6, | е 6, | 9 | 6 | Sequence 10, Appl | e 1(| e 10, | Sequence 10, Appl | 10, | 7, | e 7, | e 7, | 7, 1 | 7, 7 | e e | e 8, | e 8, | 8, 1 | 8, A | e 11, | e 11, | e 11, Ap | Sequence 11, Appl |

ALIGNMENTS

| 망 | Qy | Query Match Best Local : Matches 4 | PCT-0802-04432-12 | ; OTHER | ; FEATURE: | ; ORGANI | ; TYPE: PRT | ; LENGTH: 48 | ; SEQ ID NO 12 | ; SOFTWAR | ; NUMBER | ; CURRENT | ; CURRENT | ; FILE RE | ; TITLE C | ; APPLICA | ; APPLICA | ; GENERAL | ; Sequence | PCT-US02-04432-12 | RESULT 1 |
|---|--|---|-------------------|---|------------|-------------------------------|-------------|--------------|----------------|---|--------------------------|---------------------------------|--|--|--|-------------------------|--------------------------------|----------------------|--|-------------------|----------|
| 1 RVVRVVRRWVRRVRRVWRRVVRVVRRWRRVRRVWRRVVRVV | 1 RVVRVVRRWVRRVVRRVWRRVVRRWRRVVRVVRWRVV 48 | Query Match 100.0%; Score 250; DB 1; Length 48; Best Local Similarity 100.0%; Pred. No. 6.4e-21; Matches 48; Conservative 0; Mismatches 0; Indels 0 | 9432-12 | OTHER INFORMATION: artificial peptides derived from HIV-1 | (E) | ORGANISM: Artificial Sequence | PRT | 1: 48 | to 12 | SOFTWARE: FastSEQ for Windows Version 3.0 | NUMBER OF SEQ ID NOS: 12 | CURRENT FILING DATE: 2002-02-13 | CURRENT APPLICATION NUMBER: PCT/US02/04432 | FILE REFERENCE: A34001-PCT / 072396.0223 | TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES | NT: Timothy A. Mietzner | APPLICANT: Ronald C. Montelaro | GENERAL INFORMATION: | Sequence 12, Application PC/TUS0204432 |)4432-12 | |

Gaps

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; APPLICANT: Timothy A. Mietzner; TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES; FILE REFERENCE: A34001-A / 072396.0222; CURRENT APPLICATION NUMBER: US/10/079,075; CURRENT FILING DATE: 2002-02-19; NUMBER OF SEQ ID NOS: 12; SOFTWARE: FastSEQ for Windows Version 3.0; SEQ ID NO 10; CENGTH: 24; TYS. PRT CRÉGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 13
US-09-785-059-10
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US-10-079-075-10
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES;
FILE REFERENCE: A 34001 / 072396.0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 7
LENGTH: 42
TYPER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; OTHER INFORMATION: Artificial peptide derived from HIV-1 US-09-785-059-10
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                                                                                                                                                                                                                                    Sequence 10, Application US/10079075 Publication No. US20020188102A1 GENERAL INFORMATION;
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Best Local :
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 10
LENGTH: 24
                                                                                                                                                                                                  APPLICANT: Ronald C. APPLICANT: Timothy 1
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OTHER INFORMATION: Artificial
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ORGANISM: Artifical sequence
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nes 24; Conserv
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                                                                                                                                                                                                                    Montelaro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    52.0%; Score 130; DB 9; 100.0%; Pred. No. 7e-09;
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Pred. No. 3.2e-10;
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US-09-785-058-10
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Search completed: June Job time: 25.5319 secs
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Best Local Similarity 100.
24; Conservative
                                                                                                                                                                                                                                SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 10
.LENGTH: 24
TYPE: PRT
ORGANISM: Artifical sequence
                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 10, Applica Publication No. US20 GENERAL INFORMATION:
                                                                                                                           Matches
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Best Local (
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CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A 34001 / 072396.0222
                                                                                                                                                                                                                     FEATURE:
                                                                                                                           24;
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Similarity 100.0%;
24; Conservative (
                                                                                           RRWVRRVRRVWRRVVRRWVRR 30
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100.0%; Pred. No. 7e-
tive 0; Mismatches
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Pred. No.
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RESULT 9
US-09-785-058-8
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US-09-785-059-8
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                                                                                         APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROSIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 86
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Best Local S
Matches 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILE REFERENCE: A33577 / 072396.0217
CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 8, Application US/10079075
Publication No. US20020188102A1
GENERAL INFORMATION:
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Best Local Similarity
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                     ORGANISM: Artifical sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT ORGANISM: Artificial Sequence
                                                           TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PEATURE: OTHER INFORMATION: Artificial peptide derived from HIV-1
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OTHER INFORMATION: Artificial peptide derived from HIV-1
                                                                             LENGTH: 48
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40; Conserv
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Pred. No. 4.1e-13;
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Pred. No. 4.1e-13;
0; Mismatches 4
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US-10-079-075-7
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                                                                                                                           ; OTHER INFORMATION: Artificial peptide derived from HIV-1
US-10-079-075-7
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US-09-785-059-7
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Matches
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 7
LENGTH: 42
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APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzne:
                                                                                                                                                                                                                        SEQ ID NO 7
                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
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Publication No. US20020188102A1
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Best Local Similarity
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TITLE OF INVENTION: VIRUS DETIDES ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
                                                                                                                                                                                                                                                                                                                                  APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne:
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CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
                                                                                                                                                         TYPE: PRT ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT
ORGANISM: Artifical sequence
FEATURE:
                                                                                                                                                                                                         LENGTH: 42
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                     7 RRWVRRVRRVWRRVVRVVRRWVRRVWRRVVRRVVRR 44
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RRVVRRVVRRVVRRVVRRVVRRVVRRVVRRVVRVVRR
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89.5%;
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                                                                        Score 144; DB 9;
Pred. No. 3.2e-10;
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Pred. No. 3.2e-10;
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Pred. No. 4.1e-13;
0; Mismatches 4
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                                                              Mismatches
                                                                                          DB 9; Length 42;
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38
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RESULT 12 US-09-785-058-7

Sequence 7, Application US/09785058 Publication No. US20030036627A1

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US-09-785-058-12
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US-09-785-059-11
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US-10-079-075-12
                                                                         ; FEATURE:
; OTHER INFORMATION:
US-09-785-059-11
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                                                                                                                       CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 11
LENGTH: 36
TYPE: PRT
ORGANISM: Artifical sequence
                                                                                                                                                                                                                                                                                                                                                                  Sequence 11, Application US/09785059
Patent No. US20020169279A1
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Best Local Similarity
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Best Local Similarity
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Query Match
Best Local Similarity
Matches 33; Conserv
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CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                                                                                                                         APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A33577 / 072396.0217
                                                                                                                                                                                                                                                                                                               APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Ronald C. APPLICANT: Timothy I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: artificial peptides derived from HIV-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Artifical sequence FEATURE:
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     Conservative
                                                                                           Artificial peptide derived from HIV-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Score 250; DB 9; 100.0%; Pred. No. 3.6e-22;
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 70.4%; Score 176; DB 9; 100.0%; Pred. No. 6.5e-14; Live 0; Mismatches 0;
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Pred. No. 3.6e-22;
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                                    Length 36
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                                                                                                              RESULT 7
US-09-785-059-8
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GENERAL INFORMATION:

APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIV
                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 11
LENGTH: 36
                                                                          Sequence 8, Application US/09785059 Patent No. US20020169279A1
                                                                                                                                                                                                                                                           Matches
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Best Local (
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LENGTH: 36
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLS OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
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TITLE OF INVENTION: VIRUS DENTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Artifical sequence
                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
CANT: Timothy A. Mietzner
OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
                                                                                                                                                                                                                                                                                                                                                     INFORMATION: Artificial peptide derived from
                                                                                                                                                                                                          13 VRRVWRRVVRVVRRWVRRVRRVWRRVVRVVRVW 45
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Similarity 100.0%;
33; Conservative (
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Pred. No.
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Pred. No.
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6.5e-14
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Maximum Match 100%
Listing first 45 summaries
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seq length: 2000000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
cgn2_6/ptodata/1/pubpaa/PCTUS_PUBCOMB.pep:*
cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
cgn2_6/ptodata/1/pubpaa/US09_NEW_PUB.pep:*
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_G/ptodata/1/pubpaa/US06_PUBCOMB.pep:*
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ptodata/1/pubpaa/US08_NEW_PUB.pep:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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| Result No. | Score | Query Match | Query Match Length | B | ID | Description |
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| _ | 250 | 100.0 | 48 | 9 | US-09-785-059-12 | Sequence 12, Appl |
| 2 | 250 | 100.0 | 48 | 9 | US-10-079-075-12 | |
| ω | 250 | 100.0 | 48 | φ | US-09-785-058-12 | • |
| 4 | 176 | 70.4 | 36 | 9 | US-09-785-059-11 | 11, |
| u | 176 | 70.4 | 36 | ဖ | US-10-079-075-11 | 11, |
| თ | 176 | 70.4 | 36 | φ | US-09-785-058-11 | 11, |
| 7 | 170 | 68.0 | 48 | 9 | US-09-785-059-8 | Sequence 8, Appli |
| 8 | 170 | 68.0 | 48 | 9 | US-10-079-075-8 | Sequence 8, Appli |
| 9 | 170 | 68.0 | 48 | 9 | US-09-785-058-8 | Sequence 8, Appli |
| 10 | 144 | 57.6 | 42 | 9 | US-09-785-059-7 | Sequence 7, Appli |
| 11 | 144 | 57.6 | 42 | 9 | US-10-079-075-7 | Sequence 7, Appli |
| 12 | 144 | 57.6 | 42 | φ | US-09-785-058-7 | Sequence 7, Appli |
| 13 | 130 | 52.0 | 24 | 9 | US-09-785-059-10 | Sequence 10, Appl |
| 14 | 130 | 52.0 | 24 | 9 | US-10-079-075-10 | Sequence 10, Appl |
| 15 | 130 | 52.0 | 24 | 9 | US-09-785-058-10 | • |
| 16 | 123 | 49.2 | 36 | 9 | .US-09-785-059-6 | Sequence 6, Appli |
| 17 | 123 | 49.2 | 36 | ø | US-10-079-075-6 | Sequence 6, Appli |
| 18 | 123 | 49.2 | 36 | 9 | US-09-785-058-6 | |
| 19 | 97 | 38.8 | 31 | 9 | US-09-785-059-3 | |
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| 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | ω | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 |
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| 57 | 57 | 59 | 59 | 59 | 60 | 61 | 61 | 61 | 61 | 63.5 | 67 | 67 | 69 | 69 | 69 | 72 | 72 | 72 | 77 | 77 | 88 | 88 | 88 | 97 | 97 |
| • | • | | 23.6 | • | • | ٠ | ٠ | • | 24.4 | • | • | 26.8 | ٠ | ٠ | ٠ | ٠ | ٠ | ٠ | ٠ | • | ٠ | • | ٠ | ٠ | ٠ |
| 269 | 269 | 28 | 28 | 28 | 314 | 394 | 12 | 12 | 12 | 66 | 831 | 768 | 635 | 635 | 634 | 31 | 31 | 31 | 770 | 770 | 24 | 24 | 24 | 31 | 31 |
| 9 | 9 | ø | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 10 | 10 | 10 | 10 | 10 | 10 | 9 | 9 | 9 | 10 | φ | 9 | | φ | 9 | 9 |
| US-10-190-469-3 | US-09-964-008-5 | US-09-785-058-1 | US-10-079-075-1 | US-09-785-059-1 | US-09-764-891-4170 | US-10-081-816-40 | US-09-785-058-9 | US-10-079-075-9 | US-09-785-059-9 | US-09-864-761-33833 | US-09-732-665-7 | US-09-732-665-6 | US-09-732-665-9 | US-09-732-665-8 | US-09-732-665-10 | US-09-785-058-2 | US-10-079-075-2 | US-09-785-059-2 | US-09-815-656-31 | US-09-992-896-9 | US-09-785-058-5 | US-10-079-075-5 | US-09-785-059-5 | US-09-785-058-3 | US-10-079-075-3 |
| • | Sequence 5, Appli | Sequence 1, Appli | Sequence 1, Appli | ۲, | 4170 | Sequence 40, Appl | Sequence 9, Appli | - | Sequence 9, Appli | Sequence 33833, A | | Sequence 6, Appli | Sequence 9, Appli | 8, 2 | Sequence 10, Appl | Sequence 2, Appli | | Sequence 2, Appli | Sequence 31, Appl | Sequence 9, Appli | e 5, | Sequence 5, Appli | Sequence 5, Appli | • | Sequence 3, Appli |

ALIGNMENTS

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RESULT 2
US-10-079-075-12
is Sequence 12, Application US/10079075
; Sequence 10, Application US/10079075
; Publication No. US/20020188102A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            , OTHER INFORMATION; artificial peptides derived from HIV-1 US-09-785-059-12
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US-09-785-059-12
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GENERAL INFORMATION:
APPLICANT: Ronald C. Montelaro
APPLICANT: Timochy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT APPLICATION 9078: 2002-02-19
NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS: 12
SOPTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 12
LENGTH: 48
TYPE: PRT
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                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 100.0%; Score 250; DB 9; Best Local Similarity 100.0%; Pred. No. 3.6e-22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Ronald C. Montelaro
APPLICANT: Timochy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Artifical sequence FEATURE:
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RESULT 14
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ID AAB11
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Best Local S
Matches 23
                                                          10-NOV-1998;
30-APR-1999;
14-MAY-1999;
16-JUL-1999;
               Primi D,
Bonelli
                                                                                                                                                                              SEN virus; SENV; gastrointestinal tract disorder; infi
proliferative disorder; hepatopathy; hepatitis; viral
                                                                                                                                                                                                                                                                                                                                                                                                                     The invention relates (S1=ABA05987) or 3322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2002-097552/13.
N-PSDB; ABA05987.
                                                                                                   09-NOV-1999;
                                                                                                                     18-MAY-2000.
                                                                                                                                     WO200028039-A2
                                                                                                                                                       Hepatitis virus
                                                                                                                                                                      vaccination; gene therapy
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                                                                                                                                                                                                                                                                                                                                                                            Sequence
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08-NOV-2000;
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                                        (DIAS-) DIASORIN SRL.
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l Similarity 53.5%;
23; Conservative
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                       Fiordalisi G,
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              Vaglini L,
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2000JP-0340614.
                                                                                                                                                                                                                          (first entry)
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                                                         98IT-MI02437.
99IT-MI00923.
99EP-0830298.
99EP-0113932.
                                                                                                    99WO-EP08566
                                                                                                                                                                                                                                                                                                                                                                                                                                               20-22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              for diagnosis of non-A,
                                                                                                                                                                                                                                                                                                                                                                                                   to an isolated nucleic acid, comprising ($2=ABA05995) nucleotide sequence fully ful for diagnosis of non-A, non-B, non-C is that of a TTV polypeptide, useful to t
                                                                                                                                                                                                                                                                                                                                                                                                                                               37pp; Japanese
               Olivero
                        Mantero
                                                                                                                                                                                                          SEQ ID
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                                                                                                                                                                                                                                                                                                                                         Score 74.5; DB Pred. No. 0.76; O; Mismatches
      o GL, Mac.
                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                           NO: 196.
              Mattioli S, al Corso A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                               non-B, non-C hepatitis
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              Sottini
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                                                                                                                                                                                                                                                                                                                                                         Length
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5 hepatitis.
                                                                                                                                                                                        disease;
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RESULT 15
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Query Match
Best Local S
Matches 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present invention is concerned with the sequence of the genome of the SEN virus (SENV), and the proteins encoded by it. SENV is thought to be the cause of hepatopathies which are not linked to the presence of the hepatitis A, B and E viruses in man. The genome and proteins of this virus can be used in gene therapy and vaccination against the virus, which also causes disorders of the gastrointestinal tract, including Crohn's disease and lupus erythematosus, inflammatory diseases, and proliferative disorders such as cancer.
                                                                                   The invention relates to an isolated nucleic acid, comprising a 3899 (S1=ABA05987) or 3322 (S2=ABA05995) nucleotide sequence fully defined in the specification useful for diagnosis of non-A, non-B, non-C hepatitis. The present sequence is that of a TTV polypeptide, useful to the
                                                Sequence
                                                                                                                                                 Disclosure; Page 28-29; 37pp; Japanese
                                                                                                                                                                                                     N-PSDB;
                                                                                                                                                                                                                 WPI; 2002-097552/13
                                                                                                                                                                                                                                                                                           11-MAY-2000;
08-NOV-2000;
                                                                                                                                                                                                                                                                                                                                 11-MAY-2001;
                                                                                                                                                                                                                                                                                                                                                                                                           Simian TT virus
                                                                                                                                                                                                                                                                                                                                                                                                                                    Simian
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Simian TTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nucleic acids representing the genome of the SEN virus (encoded proteins, useful for treatment of hepatopathies, diseases and proliferative disorders such as cancer -
                                                                                                                                                                           DNA and proteins for diagnosis of non-A,
                                                                                                                                                                                                                                          Abe K;
                                                                                                                                                                                                                                                                                                                                                           15-NOV-2001.
                                                                                                                                                                                                                                                                                                                                                                                    WO200185771-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAM47989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAM47989 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 1;
                                                                         invention
                                                                                                                                                                                                                                                                   (EISA )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>بر</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24;
                                                                                                                                                                                                                                                                                                                                                                                                                                  TTV; virus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7
                                                                                                                                                                                                     ABA05995
                                                                                                                                                                                                                                                                   EISAI CO LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RRWRRRRRRI PRRRAQRPVRR--RRARRVRRRRWGR-----RRWR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RRWVRRVRR--VWRRVVRVVRRWVRRVRV----WRRVVRVVRWR 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page 386-389; 392pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CH71
                                                727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       762 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                           2000JP-0137894.
2000JP-0340614.
                                                                                                                                                                                                                                                                                                                                 2001WO-JP03954.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first
                                                AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                  diagnosis;
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          28.8%;
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Score 72; DB
Pred. No. 1.4;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       727
                                                                                                                                                                                                                                                                                                                                                                                                                                    hepatitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                         B
                                                                                                                                                                            non-B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21;
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                                                                                                                                                                              non-C hepatitis
                      Length 727;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
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l Similarity 23; Conserv

Conservative

0

12;

Indels

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Gaps

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18

ILRLWRNWLLWELILLLRRNRLLRLLILLLWRNRLLRLLILWLRRNRLLWLLILRLRRNW

77

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 518
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07-MAR-2002

(first entry

AAM47987 standard; Protein;

765

8

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Simian TTV; virus; diagnosis; hepatitis; CH65-1.

Simian TTV CH65-1 SEQ ID NO

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RESULT 11
                                                                                                                                                           polynucleotides are also used in diagnostics as expressed sequence tags cfor identifying expressed genes. (I) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating the control of the involving aberrant protein expression or biological activity. The polypeptide and polynucleotide sequences have applications in classifications of diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits to assess biodiversity and to produce other types of data and products dependent on DNA and canno acid sequences of the invention.

Conte: The sequence data for this patent did not appear in the printed specification, but was obtained in electronic format directly from WIPO are trained and in the printed of the printed directly from wipons to the format directly from wipons to the format directly from wipons are discontinuations.
                                      Matches
                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutation responsible for genetic disorders or other traits and to assess
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-639362/73.
N-PSDB; AAS86738.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31-MAR-2000; 2000US-0540217.
23-AUG-2000; 2000US-0649167.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; chromosome mapping; gene mapping; gene therapy; forensic; food supplement; medical imaging; diagnostic; genetic disorder.
                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                              polymerase chain reaction (PCR) primers, oligomers, and and gene mapping, and in recombinant production of (II)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         polypeptide (II) sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 20; SEQ ID No 52910; 103pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-MAR-2001; 2001WO-US08631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200175067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel human diagnostic protein #22542.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABG22551 standard;
                                    Local Similarity
les 18; Conserv
                                                                                                                                             ftp.wipo.int/pub/published_pct_sequences.
                                                                                                              643 AA;
                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           relates to isolated polynucleotide (I) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Protein;
                                                    30.0%;
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                                    14;
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                                                  Score 75; DB 2:
Pred. No. 0.56;

    is useful as hybridisation probes,

                                    Mismatches
                                                                     DB 22;
                                    12;
                                                                     Length 643;
                                  Indels 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and for chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mutations
                                  Gaps
45
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RESULT 13
AAM47987
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AAB11535
ID AAB11
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                                                    밁
                                                                                                                                                       Best
                                                                                                    Matches
                                                                                                                            Query Match
                                                                                                                                                                          The present invention is concerned with the sequence of the genome of t SEN virus (SENV), and the proteins encoded by it. SENV is thought to be the cause of hepatopathies which are not linked to the presence of the hepatitis A, B and E viruses in man. The genome and proteins of this virus can be used in gene therapy and vaccination against the virus, which also causes disorders of the gastrointestinal tract, including Crohn's disease and lupus erythematosus, inflammatory diseases, and proliferative disorders such as cancer.
                                                                                                                                                                                                                                                                                                                    Nucleic acids representing the genome of the SEN virus (SENV) and encoded proteins, useful for treatment of hepatopathies, inflammatory diseases and proliferative disorders such as cancer -
                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-APR-1999;
14-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hepatitis virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEN virus; SENV; gastrointestinal tract disorder; inflammatory disease; proliferative disorder; hepatopathy; hepatitis; viral infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEN virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAB11535;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB11535 standard; Protein; 743
                                                                                                                                                                                                                                                                                              Claim 1; Page 356-358; 392pp; English.
                                                                                                                                                                                                                                                                                                                                                                         WPI; 2000-376551/32.
                                                                                                                                                                                                                                                                                                                                                                                                Bonelli F,
                                                                                                                                                                                                                                                                                                                                                                                                              Primi D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09-NOV-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200028039-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              vaccination; gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                              16-JUL-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                      (DIAS-) DIASORIN SRL.
                                                                                                                 Local
                                                  43
                                                                          20;
                                                                                                                 Similarity
                                                   RVRRRFYRGRRRGWRR-----RRYIRRRRRL-RRKKLVLTQWQ
                                                                                                                                                                                                                                                                                                                                                                                                Fiordalisi G,
, Vaglini L,
                                                                                                                                                       743 AA;
                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry
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99IT-MI00923.
99EP-0830298.
99EP-0113932.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99WO-EP08566.
                                                                                                                30.0%;
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Olivero P, Dal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID
                                                                                                    7;
                                                                                                                Score 75;
Pred. No.
                                                                                                    Mismatches
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al Corso A,
                                                                                                               0.65;
                                                                                                                            DB 21; Length 743;
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Bonelli M;
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RESULT 9
AAB37535
ID AAB3
AC A
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                                                                              Query Match
Best Local S
Matches 22
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Best Local :
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                                                                                                                                                                                                                          The present invention provides peptides derived from the TT viscan be used in vaccines against the virus. It is thought that twirus may cause chronic liver disease and hepatitis in humans. peptides are also useful in the diagnosis of TT infection.
                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                              Peptides with TT virus amino acid sequences, prevention of TT virus infections -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human antibody binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-MAR-2001
                                                                                                                                                                                                                                                                                                                                                               Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-015971/02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TRIP-) TRIPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            04-MAY-1999;
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7 RRWVRRVRRVWRRVVRVVR---
                                                                              . Similarity 22; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RRWVRRVRRVWRRVVRVVR-----
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                                                                                                                                                                                                                                                                                                                                                             Page 6;
                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
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                                                                                                                                                                                                                                                                                                                                                        24pp;
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                                                                                                   30.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            site; liver disease; hepatitis; vaccine
                                                                                                                                                                                                                                                                                                                                                             English.
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*
                                                                           Score 77; DB 2
Pred. No. 0.4;
5; Mismatches
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Pred. No. 0.
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0.4;
                                                                                                                               22;
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                                                                              12;
                                                                                                                                                                                                                                                                                                                                                                                                                                   useful
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-RWVRRVRRVWRRVVR-----
                                                                                                                          Length
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                                                                              Indels 28;
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                                                                                                                                                                                                                                                                               virus which
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                                                                        Gaps
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   Query Match
Best Local S
Matches 18
                                                                                                                                                                                                                   The invention relates to novel genes (ABL89449-ABL90853) and proteins (ABB89040-ABB90444) useful for preventing, treating or ameliorating medical conditions e.g. by protein or gene therapy. The genes are isolated from a range of human tissues disclosed in the specification. The nucleic acids, proteins, antibodies and (ant)agonists are useful in the diagnosis, treatment and prevention of: (a) cancer, e.g. breast and ovarian cancer and other cancers of the adrenal gland, bone, bone marrow, breast, gastrointestinal tract, liver, lung, or urogenital; (b) immune disorders e.g. Addison's disease, allergies, autoimmune hacedytic anaemia, autoimmune thyroiditis, diabetes mellitus, Crohn's disease, allergies mellitus, Crohn's
                                                                Sequence
                                                                                          Note: The sequence data for this patent did not form part printed specification, but was obtained in electronic form from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                  disease, multiple sclerosis, rheumatoid arthritis and ulcerative colitis; (c) cardiovascular disorders such as myocardial ischaemiss; (d) wound healing; (e) neurological diseases e.g. cerebral anoxia an epilepsy; and (f) infectious diseases such as viral, bacterial, fung and parasitic infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel 1405 isolated polypeptides, useful for diagnosis, treatment prevention of neural, immune system, muscular, reproductive, gastrointestinal, pulmonary, cardiovascular, renal and proliferati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cytostatic; immunosuppressive; nootropic; neuroprotective; antiviral; antiallergic; hepatotropic; antidiabetic; antiinflammatory; antiulcer; vulnerary; anticonvulsant; antibacterial; antifungal; antiparasitic; cardiant; gene therapy; cancer; immune disorder; cardiovascular disordeneurological disease; infection; human; secreted protein.
                                                                                                                                                                                                                                                                                                                                                                                                Claim 11;
                                                                                                                                                                                                                                                                                                                                                                                                                               disorders
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2002-122018/16.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       polypeptide
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                   Similarity
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                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 2376; 2081pp +
                                                                  136 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rosen CA;
    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
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                 Score
Pred.
    Mismatches
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              75;
No.
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 12;
                                Length 136;
   Indels
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directly
 Gaps
                                                                                                                                                           fungal
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AAW99020 7
AAW99020 1D AAW9
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XX NOn-
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XX Viri
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XX 13-M
PR 25-J
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Best Local S
Matches 22
                                                                                                                                                                                                                                                                                                                                     13-MAR-1998;
25-JUL-1997;
09-OCT-1997;
                                                                                       Gene isolated from non-B non-C non-G hepatitis DNA virus expression products, useful for diagnosis and treatment and screening of blood for transfusion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The protein of the invention is useful as an immunogen useful for detecting anti-TT virus antibodies and for raising specific antibodies for detection of TT virus proteins. Antibodies raised against the protein of the invention provide rapid and reliable identification of all TT virus infections, regardless of genotype and/or subtype. The present sequence was used in an example from the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention relates to a novel immunogenic protein from Tvirus (AAM47794). TT virus is associated with non-A to G hepatitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New immunogenic polypeptide from Therapeutic vectors, also related
                                             Claim 20; Page 84-87;
                                                                                                                                                                                              WPI; 1999-142937/12.
                                                                                                                                                                                                                                        Nishizawa T,
                                                                                                                                                                                                                                                                                                                                                                                                                                    27-JUL-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   04-FEB-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO9905282-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hepatitis virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               virion;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hepatitis virus; non-B non-C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13-MAY-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAW99082
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                                                                                                                                                                                                                                                                                        (TAMU/) TAMURA R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2002-049351/06
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   non-C, non-G hepatitis virus protein sequence SEQ ID NO:9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                l Similarity
22; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               detection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Komurian-Pradel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ::|:|:
IIIRQWQ 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -VVRRWR 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RRWRRWRRR PWRRRWR TRRRR PARRR GRRRNVRRRRRGGRWRRRYRR - WKRKGRRRKKAK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RRWVRRVRRVWRRVVRVVR----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fig 1; 45pp; French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               756 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                        Okamoto
                                                                                                                                                                                                                                                                                                                                     98JP-0082962.
97JP-0233246.
97JP-0314196.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             screening;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Protein; 770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30.8%;
                                          113pp;
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Pred. No. (
                                             Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             non-G hepatitis virus;
; infection; blood tran;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              n TT virus,
ed nucleic a
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ----RWVRRVRRVWRRVVR-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12;
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                                                                                                                   and its
hepatitis
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RESULT 8
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             non-C non-G hepatitis DNA virus. It is 3500-4000 bases in length and contains two overlapping open reading frames (ORF). It is obtained by polymerase chain reaction (PCR) amplification using primer. The present sequence represents a specifically claimed non-B non-C non-G hepatitis protein sequence. The gene can be used for the production of vaccines for prevention and treatment of non-B non-C non-G hepatitis infection. Diagnosis of such infection, and screening of blood (e.g. intended for transfusion) for the presence of the virus, by using the virion or antigenic peptides as reagents for detection of antibodies to the virus, or by direct detection of the gene using PCR with primers derived from
The TT virus (TTV) genome was obtained from the serum of a West African individual (GH1). It is a circular, negative single-stranded DNA virus. The GH1 isolate was found to be 3852 nucleotides in length, 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTV; TT virus; blood transmission; detection; amplification; transplantation; xenotransplantation; vector; ORF1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         04-DEC-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                  New oligomer primer useful for the detection of TT virus in test samples and tissues and organs for use in (xeno)transplantation
                                                                                                                                                                    Leary TP, S:
Muerhoff AS,
                                                                                                                                                                                                                                         05-FEB-1999;
                                                                                                                                                                                                                                                                     04-FEB-2000;
                                                                                                                                                                                                                                                                                                 10-AUG-2000
                                                                                                                                                                                                                                                                                                                                                       Active-site
                                                                                                                                                                                                                                                                                                                                                                                  Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                               Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                        TT virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TT virus (TTV-GH1)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the gene
                                                      Examplé 3; Page 105; 139pp; English
                                                                                                                                                                                                             (ABBO ) ABBOTT LAB
                                                                                                                                                                                                                                                                                                                           WO200046407-A2
                                                                                                                            2000-514969/46.
DB; AAA53632.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  70 IIIRQWQ 76
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11 RRWRRWRRPWRRRWRTRRRRPARRRGRRRNVRRRRRGGRWRRRYRR-WKRKGRRRKKAK
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                                                                                                                                                                    Simons JN, Erker JC,
S, Pilot-Matias TJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        770 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                     2000WO-US02982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                         99US-0245248
                                                                                                                                                                                                                                                                                                                                                       /label=
126
                                                                                                                                                                                                                                                                                                                                                                                              /label=_Arginine_rich_motif
                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Protein; 770
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Pred. No.
                                                                                                                                                                      , Chalmers
Desai SM,
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                                                                                                                                                                      ML, Birkenmeyer LG, Mushahwar IK;
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01-JUL-1999 02-JUL-1999 06-JUL-1999 08-JUL-1999 08-JUL-1999 12-JUL-1999 13-JUL-1999

> 99US-0142154. 99US-0142055. 99US-0142390. 99US-0142803.

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RESULT 6
AAM47795
ID AAM47795;
AAM47795;
XX
AC AAM47795;
XY
DT 01-MAR-2002 (first entry)
XX
DE TT virus clone X94-TTV protein.
XX
Immunogen; hepatitis; X94-TTV.
XX
OS TT virus.
XX
PN W0200183757-A1.
XX
PD 08-NOV-2001.
XX
PF 30-APR-2001; 2001WO-FR01337.
XX
PA (INMR ) BIO MERIEUX.
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Matches 19
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                                                                                                                                                                                                                 10 VRRVRRVWRRVVRVVRRWVRRVVRRVWRRVVRVVRRWR 46
                                                                                                                                                                                                                                      19;
                                                                                                                                                                                                        39 VRTLRRRWWR----TRRW-RTLRRWWRR----IRRWR 66
                                                                                                                                                                                                                                      h 31.0%;
Similarity 51.4%;
19; Conservative
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9908-0155139
9908-0155486
9908-0156559
9908-0156559
9908-0157117
9908-0157753
9908-0158022
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18-AUG-1999; 20-AUG-1999; 20-AUG-1999; 20-AUG-1999; 23-AUG-1999; 25-AUG-1999; 26-AUG-1999; 27-AUG-1999; 27-AUG-1999; 27-AUG-1999; 30-AUG-1999; 31-AUG-1999; 31-AUG-1999;

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RESULT 4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Peptides for determination of anti-TT virus antibody and method serum classification of TT virus using the peptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Serum type classification; TT virus; antibody; viral infection; identify; treatment.
                                                                                                                      17-OCT-2000
                                                                                                                                                                          AAG28909 standard; Protein; 82 AA
                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                   used in the course of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; Page 7; 12pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2000-415430/36.
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                                                 Protein identification; signal transduction pathway; metabolic pathway; hybridiaation assay; genetic mapping; gene expression control; promoter;
                                                                                                                                                 AAG28909;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (SRLS-) SRL
              Arabidopsis thaliana.
                                                                                           Arabidopsis thaliana protein fragment SEQ ID NO:
                                      termination sequence
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25-MAR-1999;
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99US-0134221.
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99US-0135123.
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99US-0132863
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02-AUG-1999; 03-AUG-1999; 04-AUG-1999; 04-AUG-1999; 05-AUG-1999; 05-AUG-1999;

06-AUG-1999;

99US-0145276 99US-0145913 99US-0145918 99US-0146386 99US-0147304 99US-0147304 99US-0147302 99US-0147303 99US-0147303 99US-0147416 99US-0147416 99US-0147416 99US-0148317 99US-0148317 99US-0148317 99US-0148317 99US-014935 99US-014935 99US-014935 99US-014935 99US-014935 99US-014936 99US-014937 99US-014930 99US-015303 99US-015303 99US-015303 99US-015307 99US-015308

28-JUL-1999; 02-AUG-1999; 02-AUG-1999;

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RESULT 3
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                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 1; Page 6-7; 12pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Peptides for determination serum classification of TT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-OCT-1998;
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                                                                                         RRWVRRVRRVWRRVVRVVR--
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                                                                                                                                                        31.6%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of anti-TT virus antibody and method virus using the peptides -
                                                                                                                                 ; Score 79; DB; Pred. No. 0.03
5; Mismatches
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Pred. No. 0.00:
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0.037;
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99US-015659.
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The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from vat ftp.wipo.int/pub/published_pct_sequences.
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Copyright (c) 1993 - 2003 Compugen Ltd.
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Pred. No. is the number of results predicted by chance to I score greater than or equal to the score of the result being and is derived by analysis of the total score distribution to have a being printed,

| Result | Score | Query Match | Query Match Length DB | | ID | Description |
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| ъ | 98.5 | 39.4 | 133 | 22 | ABB61318 | Drosophila melanoq |
| ν | 86.5 | 34.6 | 95 | 21 | AAG50720 | Arabidopsis thalia |
| ω | 79 | 31.6 | 120 | 21 | AAB03839 | Protein fragment # |
| 4. | 79 | 31.6 | 120 | 21 | AAB03840 | Protein fragment # |
| v | 77.5 | 31.0 | 82 | 21 | AAG28909 | Arabidopsis thalia |
| σ | 77 | 30.8 | 756 | 23 | AAM47795 | TT virus clone X94 |
| 7 | 77 | 30.8 | 770 | 20 | AAW99082 | Non-B, non-C, non- |
| æ | 77 | 30.8 | 770 | 21 | AAY97179 | TT virus (TTV-GH1) |
| 9 | 77 | 30.8 | 770 | 22 | AAB37535 | TT virus ORF1 prot |
| 10 | 75 | 30.0 | . 136 | 23 | ABB90000 | Human polypeptide |
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New isolated nucleic acid detection reagent for detecting 1000 or more genes from Drosophila and for elucidating cell signalling and cell-cell

| 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | ω S | 34 | u u | 32 | | | | 28 | | | | | 23 | 22 | 21 | | | 18 | 17 | 16 | 15 | 14 | 13 | 12 | H |
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| 24.8 | • | ٠ | • | 25.2 | • | • | • | 25.4 | 25.4 | 25.4 | 25.4 | 25.4 | 25.4 | 25.4 | 25.4 | 25.4 | 25.4 | • | 25.8 | • | • | • | • | 26.8 | • | 27.6 | • | • | • | • | 9 | 9. | • | 30.0 |
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| AAG45794 | AAU43130 | AAU51034 | AAW31853 | AAB11540 | ABG22621 | AAB03851 | AAP81148 | ABG35897 | AAM01858 | AAM26527 | AAM14120 | AAM66250 | AAM53863 | ABB18535 | ABB33065 | ABB27894 | AAR84926 | AAU64481 | AAU59076 | AAG54778 | AAU63025 | AAU65576 | AAB84455 | AAB84454 | AAW99084 | AAB84457 | AAB84456 | AAB84458 | AAY04998 | AAM47989 | AAB11546 | AAM47987 | AAB11535 | ABG22551 |
| Arabidopsis thalia | Propionibacterium | Propionibacterium | Mycobacterium tube | SEN virus protein | | Peptide P0130 used | carB Gene product. | æ | Peptide #540 encod | | | one m | Human brain expres | #534 | #571 e | Human peptide #545 | Alpha-helix-formin | Propionibacterium | Propionibacterium | Arabidopsis thalia | Propionibacterium | oniba | | a o | , non- | Amino acid sequenc | acid | Amino acid sequenc | | Simian TTV CH71 SE | protei | ian TTV | SEN virus protein | Novel human diagno |

ALIGNMENTS

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|--|---|---------------------------------------|---------------------|------------------------------|------------------------------|------------------------------|--------------|-----------------|---|--------------------------|--|--|---|---|-----------|--|
| New isolated nucleic acid detection reagent for detecting 1000 ogenes from Drosophila and for elucidating cell signalling and ce | WPI; 2001-656860/75. N-PSDB; ABL05421. | Venter JC, Adams M, Li PWD, Myers EW; | (PEKE) PE CORP NY. | 11-JUL-2000; 2000US-0614150. | 23-MAR-2000; 2000US-191637P. | 23-MAR-2001; 2001WO-US09231. | 27-SEP-2001. | W0200171042-A2. | | Drosophila melanogaster. | Drosophila; developmental biology; cell signalling; insecticide; pharmaceutical. | prosopnita metanogaster polypeptide SEQ 10 NO 10746. | } | | ABB61318: | RESULT 1 ABB61318 ID ABB61318 standard; Protein; 133 AA. |

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RESULT 14
Q8V7G3
ID 08V7G
AC Q8V7C
DT 01-M2
DT 01-M2
DT 01-JT
OS TTV
OC V1ru
OX NCBI
RN (11)
RP SEQU
RC STRJ
RA OKAN
RX MED
RX MED
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Best Local S
Matches 22
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Hypothetical protein.

SEQUENCE 178 AA.
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01-MAR-2002
01-JUN-2002
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Q948J2;
01-DEC-2001
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Spiegel L., Nascimento L., de la Bastide M., Preston R., Kircho:
Spiegel L., Nascimento L., de la Bastide M., Preston R., Kircho:
Spiegel L., Nascimento L., de la Bastide M., Kuit K.,
King L., Baker J., Vil M.D., Zutavern T., Santos L., Kuit K.,
Cunnius D.M., Miller B., Bell M., Ballia V., Shah R., Bahret A.
Yang C., O'Shaughnessy A., Palmer L., Dedhia N., McCombie W.R.;
"Genomic Sequence for Oryza sativa, Nipponbare strain, clone
OSJNBa0060A14, from chromosme 10, complete sequence.";
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SEQUENCE 171
    "Analysis of the complete classifiable into the four
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Ehrhartoideae; Oryzeae; Oryza.
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01-DEC-2001 (TrEMBLrel 19, Last sequence up
01-DEC-2001 (TrEMBLrel 19, Last annotation
Hypothetical 19,3 kDa protein.
OSJNBA0060A14.4.
                                                               MEDLINE=21844401; PubMed=11855633;
Peng Y.H., Nishizawa T., Takahashi
                                                                                                         SEQUENCE FROM N.A.
STRAIN=CT39F;
                                                                                                                                                                           Submitted (JUL-2001)
                                                                                                                                                                                               Okamoto H.,
                                                                                                                                                                                                                                                                          Viruses; ssDNA viruses;
NCBI_TaxID=68887;
                                                                                                                                                                                                                                                                                                                                                                                                                                 Q8V7G3;
                                                Okamoto H.;
                                                                                                                                                                                                                   STRAIN=CT39F;
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AA; 18959
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  genetic groups,
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isolated
                        variants
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Q99A78;
01-JUN-2001
01-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                    Zhihua L., Haitang H., Jing H., Ruidan Z., Kangxian L. "Epidemiological and virological study on an outbreak etiology hepatitis.";
Submitted (JAN-2001) to the EMBL/GenBank/DDBJ database: EMBL; AY026466; AAK01942.1; -
InterPro, IPR004219; TTVITUS_UNk.
Pfam; PF02956; TT ORF1; 1.
SEQUENCE 763 AA; 87776 MW; 00BB1272904C848C CRC64;
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Arch. Virol. 147:21-41(2002).
EMBL; AB064604; BAB79346.1; -.
InterPro; IRR004219; TTVIRUS_Unk.
Pfam; PF02956; TT_ORF1; 1.
SEQUENCE 743 AA; 87446 MW; 54
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Best Local
Matches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q91CY5;
01-DEC-2001
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Cloning a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     multiple tissues from infected humans.";
Virology 288:358-368(2001).
EMBL; AB060597; BAB6920.1; -
InterPro; IPR004219; Trvirus_Unk.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TT virus.
Viruses; ssDNA
                        TT wirus.
Viruses; ssDNA viruses;
NCBI_TaxID=68887;
                                                                                                                              01-MAR-2002
01-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
MEDLINE=21488921;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TT virus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
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[1]
                                                                                                                                                                                  01-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Okamoto H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (FEB-1999) to the EMBL/GenBank/DDBJ
EMBL; AF119887; AAD20024.1; -
EMBL; AF119887; APD20025
InterPro; IPR004219; TTVILLE
Pfam; PF02956; TT ORF1; 1
SEQUENCE 770 AA; 90342 MW; FDB00B9112D96B:
                                                                                                                                                                                                                Q8V7C2;
                                                                                                                                                                                                                                     QBV7C2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=68887;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Heterogeneous distribution of TT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Oshikawa A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Match
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                                                                                                      (Fragment).
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                                                                                                                                                                                                                                                                                                                                                                                            - VVRRWR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RRWKRWRRRRWRTRRRRPAGRRRRRTVRRRRRGRWRRRYRR-WRRKGRRRKKKK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RRWVRRVRRVWRRVVRVVR
                                                                                                                                                                                                                                                                                                                                                                    RRWWPRRRRRRRLRR--RRPRRPVRRRRRRATVRRRRWR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       56; TT_ORF1;
766 AA; 9102
                                                                                                                              (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nishizawa
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31.6%;
llarity 55.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (TrEMBLrel.
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                                                                                                                                                                                                                                        PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    76
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zawa T., Takahashi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            91020 MW;
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g of genome
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19,
21,
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Pred. No. 0.28
1; Mismatches
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Pred. No. 0.22;
i; Mismatches
                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            D03DCCDFC9533E71 CRC64;
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us isolated
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Best Local S
Matches 21
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01-AUG-1998
01-AUG-1998
01-JUN-2002
STRAIN=WBR-1;
Reddy P.S., Idamakanti N., Zakhartchouk A.N.,
Pyne C., Babiuk L.A., Tikoo S.K.;
Submitted (CCT-1997) to the EMBL/GenBank/DDBJ
EMBL; AP030154; AAD09724.1;
InterPro; IPR004912; Adeno_VII.
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MEDLINE=21844401; PubMed=11855633;
Michizawa T., Takahashi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=98105785; PubMed=9445040;
Reddy P.S., Idamakanti N., Zakhartchouk A.N.,
Pyne C., Babiuk L.A., Tikoo S.K.;
"Nucleotide sequence, genome organization, and
bovine adenovirus type 3.";
J. Virol. 72:1394-1402(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Arch.
EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Baxi M.K., Reddy P.S., Z. Babiuk L.A., Tikoo S.K.; "Characterization of bov.
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                                                                                                                                                                                                                                 MEDLINE=99119503, PubMed=9918888;
Reddy P.S., Chen Y., Idamakanti N.,
"Characterization of early region 1
Virology 253:299-308(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=98451815; PubMed=9778793;
Lee J.B., Baxi M.K., Idamakanti N.,
Pyne C., Babiuk L.A., Tikoo S.K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Viruses;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bovine adenovirus type Viruses; dsDNA viruses,
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                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=WBR-1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STITE
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                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                               STRAIN=WBR
                                                                                                                                                                                                                                                                                                                                                                                                                           "Genetic organization and DNA sequence of early adenovirus type 3.";
Virus Genes 17:99-100(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=98318755; PubMed=9654686;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AB064628; BAB79400.1;
ER 49 49
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RESULT 9
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DT 01-M
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Q9YKL1; Q9YKL1; 01-MAY-1999 01-MAY-1999 01-JUN-2002

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viremic infants,";
Arch. Virol. 147:21-41(2002).
Arch. Virol. 147:21-50.1; -.
EMBL; AB064605; BAB79350.1; -.
R InterPro; IPR004219; TTvirus_Unk
Pfam; PF02956; TT_ORPI; 1.
Pfam; PF02956; TT_ORPI; 1.
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Q9DUC7;
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TT virus.
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STRAIN=MF-TTV3;

MEDLINE=20534983; PubMed=11080484;

MEDLINE=2054884;

MEDLINE=2054
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NCBI_TaxID=68887;
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STRAIN=CT44F;
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Peng Y.H., Nishizawa T., Takahashi
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Pfam; PF02956; TT_ORF1; 1.
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MBL; AB041958; BAB19310.1; -.
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' Y., Mattei'
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Peng Y.H., Nishizawa T., Takahashi
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nce 287:2185-2195(2000).
; AE003504; AAF48711.1; -.
ase; FBgn0030830; CG5172.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AB064627; BAB79398.1;
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                                                                   (TrEMBLrel. 16, TrEMBLrel. 16, TrEMBLrel. 16, TremBLrel. 21,
                                                                                                                                                                                                                                                                                                                                                                    34.0%;
nilarity 57.1%;
Conservative
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                                                                                                                                                               PRELIMINARY;
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unclassified ssDNA viruses
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Pred. No. 0.004
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Pred. No. 0.00039;
3; Mismatches 10
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                                                                 sequence update) annotation updat
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                                                                                                                                                                                                                                                                                                                                                                                                                     DB 12;
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Q9IFV0; Q9IFV0; 01-OCT-2000 01-OCT-2000 01-JUN-2002

(TrEMBLrel. (TrEMBLrel. (TrEMBLrel.

15, 15, 21,

Created)
Last sequence update)
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PRELIMINARY;

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Putative capsid protein. TT virus. Viruses; ssDNA viruses; unclassified NCBI_TaxID=68887;

ssDNA viruses

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RESULT
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Q91CZ2;
01-DEC-2001
01-DEC-2001
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TT virus.
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Kishimoto J., Tanaka T., Miya
"Species-specific TT viruses
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Pfam; PF02956;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted [2]
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[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR004219; TTvirus_Unk. Pfam; PF02956; TT_ORF1; 1. SEQUENCE 759 AA; 89860 MW; 5B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Heterogeneous distribution of TT virus multiple tissues from infected humans."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=68887;
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MEDLINE=20534983; PubMed=11080484;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Okamoto H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Yoshikawa A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Okamoto H., Nishizawa T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Viruses; ssDNA viruses; unclassified ssDNA viruses
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          phylogenetic relatedness.
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2956; TT_ORF1; 1.
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ilarity 58.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Takahashi M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tawara A., Peng Y.,
Iiyakawa Y., Mayumi |
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Last sequence up
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Pred. No. 0.1;
1; Mismatches
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PRELIMINARY;

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01-MAY-2000 (Tr CG5172 protein.

) (TrEMBLrel.) (TrEMBLrel.) (TrEMBLrel.)

13, 13,

Created) PRT;

Last sequence update)
Last annotation update)

CG5172

Drosophila melanogaster (Fruit fly). Bukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta; Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Musc Ephydroidea; Drosophilidae; Drosophila.

Brachycera; Muscomorpha;

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| 74 | 74.5 | 74.5 | 74.5 | 76 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77.5 | 77.5 | 77.5 | 77.5 | 77.5 | 77.5 | 77.5 | 77.5 | 77.5 | 77.5 | 77.5 | 78 | 78 | 78 |
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| Q8V7C6 | Q9DUH8 | Q8V717 | Q8V7F2 | Q39682 | Q9QUF3 | Q9WGZ0 | Q9QUB8 | Q9QUB9 | 070800 | 070796 | Q9DHA8 | Q9QUC0 | 070739 | Q9JGT1 | Q9WQH0 | 070804 | 070802 | 070798 | 070810 | Q9WAX2 | Q8V7F7 | Q99A80 | Q9DUC1 | Q8V7B7 | Q8V7C0 | 8dnoe6 | Q9DUB7 | Q9JG47 |
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ALIGNMENTS

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RA Adams M.D. (Celniker S.E., Holt R.A., Hoskins R.A., Galle R.F.,
RA Amanatides P.G., Scherer S.E., Li P.M., Hoskins R.A., Galle R.F.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
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RA Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
RA Wan K.H., Doyle C., Baxter B.G., Helt G., Relson C.R., Miklos G.L.G.,
RA Wan K.H., Doyle C., Baxter B.G., Helt G., Relson C.R., Miklos G.L.G.,
RA Wan K.H., Paybayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,
RA Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
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RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P.,
RA Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
RA Cherry J.M., Cawley S., Dahlke C., Davengort L.B., Davies P.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
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MEDLINE-20196006; PubMed=10731132;
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EMBL; AL009195; CAAL5705.1; -.
PIR; A39634; A39634
PlyBase; FBgm000377; Crn.
InterPro; IPR003107; HAT.
InterPro; IPR001440; TPR.
Pfam; PP02184; HAT; 10.
SMART; SM00386; HAT; 14.
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CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  use by non-profit institutions as long modified and this statement is not remove entitles requires a license agreement (so or send an email to license@isb-sib.ch).
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-i- SIMILARITY: CONTAINS 13 HAT REPEATS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -!- SUBCELLULAR LOCATION: NUCLEAR (POSSIBLE).
-!- TISSUE SPECIFICITY: TRANSCRIBED IN ALL CELLS DURING EMBRYONIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nuclear protein;
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135 RAVTIMPR 142
                                                                                                                                                37 RVVRVVRR 44
                                                                                                                                                                                                     75 VVSHWIKYAQWEEQQQEIQRARSIWERALDNEHRNVTLWLKYAEMEMKNKQVNHARNLWD 134
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l Similarity 23.5%;
16; Conservative
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702 AA;
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88 HAT 1.

122 HAT 2.

156 HAT 3.

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229 HAT 6.

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486 HAT 11.

522 HAT 12.

555 HAT 13.
                                                                                                                                                                                                                                                                                                                                                                                                       528 NUCLEAR LOCALIZATION SIGNAL (POTENTIAL).
94 R -> P (IN REF. 1).
84261 MW; 8E03A869B84E4A12 CRC64;
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RESULT 14
YQO6_CAEEL
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PIR; S10754; S10754.
Chromosomal protein; Nucleosome
Testis; DNA condensation; Nuclea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -!- FUNCTION: PROTAMINES SUBSTITUTE FOR HISTONES IN THE CHROMATIN OF SPERM DURING THE HAPLOID PHASE OF SPERMATOGENESIS. THEY COMPACT SPERM DNA INTO A HIGHLY CONDENSED, STABLE AND INACTIVE COMPLEX.
-!- SUBCELLULAR LOCATION: Nuclear.
-!- TISSUE SPECIFICITY: TESTIS.
-!- SIMILARITY: BELONGS TO THE PROTAMINE P2 FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                904
                                                                     P17886; Q24283; O46071;
01-MAR-1992 (Rel. 21, Creat
15-JUN-2002 (Rel. 41, Last
15-JUN-2002 (Rel. 41, Last
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Rhabditidae; Pelode
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                                                                                                                                                                                                                                                                                                                                                                                         Hypothetical SEQUENCE 4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (JUL-1995) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=6239;
Eukaryota; Metazoa; Arthropoda;
                   Drosophila melanogaster (Fruit fly)
                                  CRN OR EG:30B8.1 OR CG3193.
                                                                                                                                                DROME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAEEL
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(Rel.
(Rel.
1 55.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           stazoa, Nematoda, Chromadorea, Rhabditida, Rhabditoidea, Peloderinae, Caenorhabditis.
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Last annotation update)
protein EEED8.6 in chro
                                                                                                             Created)
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Nuclear protein.
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15EABC109F2AD6B1
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 Mandibulata; Pancrustacea;
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RA Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D., RA Adams M.D., Celniker S.E., Holt R.A., W., Honderson S.N., Galle R.F., RA Amanatides P.G., Scherer S.E., Holt R.A., Change M.A., Galle R.F., RA Amanatides P.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X., RA Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Ffeiffer B.D., RA Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Ffeiffer B.D., RA Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Ffeiffer B.D., RA Burtis M.L., Doyle C., Baxter E.G., Helt G., Welson C.R., Miklos G.L.G., RA Abril J.F., Agbayani A., An H.-J., Andrews-Ffannkoch C., Baldwin D., RA Ballew R.M., Benos P.V., Bernan B.P., Bhandari D., Bolshakov S., RA Besson K.Y., Benos P.V., Bernan B.P., Bhandari D., Bolshakov S., RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P., Chandra I., RA Burtis K.C., Busam D.A., Butler H., Cadleu E., Center A., Chandra I., RA de Pablos B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M., RA Gebabin K.C., Dung P., Bornes M., Dugan-Rocha S., Dunkov B.C., Dunn P., RA Gebabin K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P., RA Gebabin K., Gong F., Gorrell J.H., Gu Z., Ghan P., Harris M., Glasser K., Gong F., Gorrell J.H., Gu Z., Ghan P., Harris M., Glasser K., Harris M.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J., RA Harris N.L., Mattel B., McIntosh T.C., McLeod M.P., Kenison J.A., Ketchum K.A., RA Hostin D., Houston K.A., Howland T.J., Wei M.-H., Ibegwam C., RA Liuk K., Malthin R., Kalpen G.H., Ke Z., Kenison J.A., Ketchum K.A., RA Merkulbov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A., Ra McHaulbov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A., Ra Merkulbov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A., Ra Palazzolo M., Pitman G.S., Pan S., Pollard J., Puri V., Reese M.G., Ra Kulph C., Stapleton M., Strong R., Sun E., Shen H., Shen H., Shen B., Shen B., Shen B., Shen B., Shen B., Shen B., Shan M., Zhang G., Zhao Q., Zheng Y., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Z
                                                                                                                                                                                                                                                                       MEDLINE-20196011; PubMed=10731137;
Benos P.V., Gatt M.K., Ashburner M., Murphy L., Harris D.,
Benos P.V., Gatt M.K., Ashburner M., Demailles J., Cadieu E
Barrell B.G., Ferraz C., Vidal S., Brun C., Demailles J., Cadieu E
Dreano S., Gloux S., Lelaure V., Mottier S., Galibert F., Borkova
Minana B., Kafatos F.C., Louis C., Siden-Kiamos I., Bolshakov S.,
Papagiannakis G., Spanos L., Cox S., Madueno E., de Pablos B.,
Modolell J., Peter A., Schoettler P., Werner M., Mourkioti F.,
Beinert N., Dowe G., Schaefer U., Jaeckle H., Bucheton A.,
Callister D.M., Campbell L.A., Darlamitsou A., Henderson N.S.,
McMmillan P.J., Salles C., Tait E.A., Valenti P., Saunders R.D.C.,
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Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.
NCBI_TaxID=7227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN=Oregon-R;
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                                                                                                                                                        Science
                                                                                                                                                                                                                                      "From sequence to chromosome:
FUNCTION: INVOLVED IN NEUROGENESIS. LOSS OF ZYGOTIC EXPRESSION OF CRN CAUSES DEFECTS IN THE PROLIFERATION OF BRAIN NEUROBLASTS AND RESULTS IN THE ABSENCE OF IDENTIFIED NEURONAL LINEAGES IN THE CENTRAL AND PERIPHERAL NERVOUS SYSTEMS.
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Dev. 5:1080-1091(1991).
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D., Perrimon N.;
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RESULT 12
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AC P15343;
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Q9CNGB;
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or send a
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Pfam; PF00953; Glycos_transf_4; 1.
Lipopolysaccharide biosynthesis; Glycosyltransferase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MAY B.J., Zhang Q., Li L.L., Paustian M.L., Whit "Complete genomic sequence of Pasteurella multoc Proc. Natl. Acad. Sci. U.S.A. 98:3460-3465 (2001)
-!- CATALYTIC ACTIVITY: UDP-N-acetyl-D-glucosami
                                                                                                                                                                                                                                                                                                                                                                                     TRANSMEM
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COFACTOR: Magnesium and manganese (By sim RATHWAY: Lipopolysaccharide biosynthesis.
SUBCELLULAR LOCATION: Integral membrane p
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                                                                                                                                                                    13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              an email to license@isb-sib.ch)
                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   brane;
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(Rel. 41, Last annotation update)
decaprenyl-phosphate alpha-N-acetylglucosaminyltransferase
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                        STANDARD;
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38.5%;
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+ undecaprenyl N-acetyl-alpha-D-glucosaminyl
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Pred. No. 3;
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Pm70.
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RESULT 13
HSP2_HORSE
    ACCOCCA REPRESENTATION OF THE PROPERTY OF THE 
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Best Local Similarity
Matches 20; Conser
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PIR; S02787; S02787.

PIR; S10755; S10755.

Chromosomal protein; Nucleosome core; Spermatogenesis; DNA-binding; Chromosomal protein; Nucleosome protein.

Testis; DNA condensation; Nuclear protein.
Pirhonen A., Linnala-Kankkunen A., Maenpaa P.K.; "Comparison of partial amino acid sequences of two variants from stallion sperm. Structural evidence are products of different genes."; FEBS Lett. 244:199-202(1989).
                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SPERM DURING THE HAPLOID PHASE OF SPERM DNA INTO A HIGHLY CONDENSED,
-I- SUBCELLULAR LOCATION: Nuclear.
-I- TISSUE SPECIFICITY: TESTIS.
-I- SIMILARITY: BELONGS TO THE PROTAMII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pirhonen A., Linnala-Kankkunen A., Maenpaa P.K.;
"Comparison of partial amino acid sequences of two
variants from stallion sperm. Structural evidence
are products of different genes.";
FEBS Lett. 244:199-202(1989).
-i- FUNCTION: PROTAMINES SUBSTITUTE FOR HISTONES I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-APR-1990 (Rel. 14, Created)
01-AUG-1990 (Rel. 15, Last sequence up
15-JUN-2002 (Rel. 41, Last annotation
Sperm histone P2B (ST2B)
Equus caballus (Horse).
Eukaryota; Metazoa; Chordata; Craniata
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15-JUN-2002
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Equus caballus (Horse)
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                                                                                                              MEDLINE=89171259;
                                                                                                                                     SEQUENCE OF 1-25.
                                                                                                                                                                                Biochim.
                                                                                                                                                                                                                            "Primary structures of
                                                                                                                                                                                                                                                                        Pirhonen A.,
                                                                                                                                                                                                                                                                                            MEDLINE=90304188;
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                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9796;
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Pirhonen A., Valtonen P., Linnala-Kankkunen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
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Biophys. Act
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onen P., Linnala
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OF SPERMATOGENESIS. THE
SED, STABLE AND INACTIVE
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STRAIN-KIZ / MG1655;
STRAIN-KIZ / MG1655;
MEDLINE-97426617; PubMed-9278503;
Blattner F.R., Plunkett G. III, Bloch C.A
Riley M., Collado-Vides J., Glasner J.D.,
Riley M., Collado-Vides J., Kirkpatrick H.A.,
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SEQUENCE FF
STRAIN=K12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TEULINE=99047671; PubMed=9830034;
Georgellis D., Kwon O., De Wulf P., Lin E.C.(
"Signal decay through a reverse phosphorelay signal transduction system.";
T = 1.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Georgellis D., Lynch A.S., Lin B.C.C., "I'n vitro phosphorylation study of the a transduction system of Escherichia coll. J. Bacteriol. 179:5429-5435(1997).
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STRAIN=K12 / MG
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                                                                                                                                                                                                                                                                                                                     X-RAY CRYSTALLOGRAPHY (2.7 ANGSTROMS) OF 65
MEDLINE=98437504; PubMed=9761838;
Kato M., Mizuno T., Hakoshima T.;
Kato M., Mizuno f. a complex between a nov
"Crystallization of a complex between a nov
HPt domain, of the anaerobic sensor kinase
response regulator Chey.";
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                                                                                                                                                                                    Kato M., Mizuno T., Shimizu T., Hakoshima T.;
"Refined structure of the histidine-containing-phosphotransfer (HPt)
domain of the anaerobic sensor kinase ArcB from Escherichia coli at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kato M., Mizuno T., Shimizu T., Hakoshima "Insights into multistep phosphorelay fro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=97207018; PubMed=9054511; Kato M., Mizuno T., Shimizu T., H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kwon O., Georgellis D., Lin E.C.C.;
"Phosphorelay as the sole physiological route of signa
by the arc two-component system of Escherichia coli.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=20309722; PubMe
Kwon O., Georgellis D.,
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                                                         omain o. ...
.57-A resolution.";
.cta Crystallogr. D 55:1842-1849(1999).
.i- FUNCTION: Member of the two-component reseasor-regulator protein for anaerobic modulon. Activates arch via a four-step
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         X-RAY CRYSTALLOGRAPHY (2.06 ANGSTROMS)
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                   717 and Asp-576.
SUBCELLULAR LOCA
(Probable).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        complete genome sequence of Escherichia coli K-12.", nce 277:1453-1474 (1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                           88:717-723 (1997).
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                                     Integral membrane
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Query Match
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                                  MOD_RES
MOD_RES
MOTAGEN
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CONFLICT
SEQUENCE
                                                                                                                                                                                                           PROSITE; PS50109; HIS KIN; 1.

PROSITE; PS50113; PAC; 1.

PROSITE; PS50112; PAS; 1.

PROSITE; PS50110; RESPONSE REGULATORY; 1.

PROSITE; PS50110; RESPONSE REGULATORY; 1.

Sensory transduction; Transferase; Kinase; Phosphorylation; 3D
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Pfam; PF00
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InterPro; IPR003594; ATPbind ATPase.
InterPro; IPR0034359; HIS KIN sig.
InterPro; IPR003661; His kinA.
InterPro; IPR002570; Hpt.
InterPro; IPR000700; PAS-assoc_C.
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MOD_RES
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European Bioinformatics Institute
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                                                                                                                                                                                                                                                                    ; SM00387; HATPa
; SM00073; HPT;
; SM00388; HisKA
; SM00091; PAS;
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SM00387; HATPase c; 1.
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22.8%;
Similarity 28.6%;
8; Conservative
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IPR001789;
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12; signal; 1.
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PAS-ASSOCIATED C-TERMINAL (PAC)
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Score 57; DB 1
Pred. No. 5.9;
7; Mismatches
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                                                                             PHOSPHORYLATION (AUTO-).
PHOSPHORYLATION (PROBABLE)
PHOSPHORYLATION (PROBABLE)
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Matches 11
                                                                                                                                                                                                                                                                                                                                                                  STRAIN=0157:H7 / RIMD 0509952;

MEDLINE=21156231; PubMed=11258796;

Hayashi T., Makino K., Ohnishi M., Kurokawa K., Ishii K., Yokoya Han C.-G., Ohtsubo E., Nakayama K., Murata T., Tanaka M., Tobe 1 Iida T., Takami H., Honda T., Sasakawa C., Ogasawara N., Yasunag Kuhara S., Shiba T., Hattori M., Shinagawa H.;

"Complete genome sequence of enterohemorrhagic Escherichia coli O157:H7 and genomic comparison with a laboratory strain K-12.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rose D.J., Mayhew G.F., Evans P.S., Gregor J., Kirkpatrick H.A., Posfai G., Hackett J., Klink S., Boutin A., Shao Y., Miller L., Grotbeck E.J., Davis N.W., Lim A., Dimalanta E.T., Potamousis K., Apodaca J., Anantharaman T.S., Lin J., Yen G., Schwartz D.C., Welch R.A., Blattner F.R., "Genome sequence of enterohaemorrhagic Escherichia coli O157:H7."

"Bature 409:529-533 (2001).
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or send a
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15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Aerobic respiration control sensor protein arcB
ARCB OR Z4574 OR ECS4089.
Escherichia coli O157:H7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nature
[2]
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PRINTS; PR00988; URIDINKINASE.
TIGRFAM8; TIGR00235; udk; 1.
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InterPro; IPR000764; Uridine_kin.
Pfam; PF00485; PRK; 1.
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MEDLINE=21074935; PubMed=11206551;
Perna N.T., Plunkett G. III, Burland V.,
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          group from a His in the primary transmitter dome the receiver domain and to a His in the secondar domain (By similarity).

SIMILARITY: CONTAINS 1 HISTIDINE KINASE DOWNSTRANTED CONTAINS 1 DEFENDED TO THE SIMILARITY: CONTAINS 1 DEFENDED TO THE SIMILARITY CONTAINS 1 DEFENDED TO THE SIMILARITY
                                                                                                                                                                                                                        Sensor-regulator protein for anaerobic repression of the arc modulon. Activates arcA via a four-step phosphorelay. ArcB can also dephosphorylate arcA by a reverse phosphorelay involving His-717 and Asp-576 (By similarity).
                                                                                                                                                                                                                                                                                                                 Res. 8:11-22(2001). FUNCTION: Member of the two-component regulatory system arcB/arcA.
                                                                                                                                                                                               SUBCELLULAR LOCATION: Integral membrane protein. Inner membrane
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an email to license@isb-sib.ch).
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CONTAINS 1 HISTIDINE KINASE DOMAIN
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19 ATP (POTENTIAL).
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Tanaka M., Tobe T.,
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R SMART; SM000387; HATPase_C; 1.

R SMART; SM000387; HATPase_C; 1.

R SMART; SM00038; HiskA; 1.

R SMART; SM00091; PAS; 1.

R PROSITE; PS50109; HIS KIN; 1.

R PROSITE; PS50112; PAG; 1.
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01-AUG-1991
15-JUN-2002
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or send a
                                                                        Aerobic respiration ARCB OR B3210.
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the European Bioinformatics Institute. The
use by non-profit institutions as long a
modified and this statement is not removed.
                                   Bacteria; Proteobacteria;
                                                      Escherichia
NCBI_TaxID=562;
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8; Conserv
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7; Mismatches
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RA Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
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RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
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RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Gelbart W.M., Glasser K.,
RA Harris M.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
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RA Liu K., Mallshina N.V., Mobarry C., Morris J., Moshrefi A.,
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RA Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
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RA Rinert K., Renington K., Saunders R.D.C., Scheeler F., Shen H.,
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RA Zhong K.H., Zhong W., Rabin G.M., Venter J.C.,
RA Zhong R.H., Zhong W., Rabin G.M., Venter J.C.,
RA Zhong R.H., Zhong W., Shong M., Shong L.,
RA Cheng R.H., Shong W., Shong R., Shong L.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=21407712; PubMed=11516643; Dunipace L., Melster S., McNealy C "Spatially restricted expression o Drosophila gustatory system."; Curr. Biol. 11:822-835(2001).
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Clyne P.J., Warr C.G., Carlson J.R.;
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Science 287:1830-1834(2000).
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Adams M.D., Celniker S.E., Holt R.A., E
Amanatides P.G., Scherer S.E., Li P.W.,
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Muscomorpha; Ephydro
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Unpublished observations (NOV-2001).
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                                                                  TY: BELONGS TO FAMILY DR-TR OF G-PROTEIN COUPLED S. SUBFAMILY VI.
Ref.1 sequence differs from that them.
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RESULT 8
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modified and this statement is not removed;
entities requires a license agreement (See l
or send an email to license@isb-sib.ch).
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                 This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Entropean Bioinformatics Institute. There are no restude by non-profit institutions as long as its content
                                                                                                                                                               halodurans and genomic sequence comparison Nucleic Acids Res. 28:4317-4331(2000).
-I- CATALYTIC ACTIVITY: ATP + uridine = ADF -I- CATALYTIC ACTIVITY: ATP + cytidine = AE
                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
STRAIN=C-125 / JCN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15-JUN-2002 (Rel. 41, Created)
15-JUN-2002 (Rel. 41, Last sequence up
15-JUN-2002 (Rel. 41, Last amotation
Uridine kinase (EC 2.7.1.48) (Uridine
                                                                                                                                                                                                                     "Complete genome sequence of the alkaliphilic halodurans and genomic sequence comparison wit
                                                                                                                                                                                                                                                                         MEDLINE=20512582; PubMed=11058132;
Takami H., Nakasone K., Takaki Y., Maeno G., S:
Fuji F., Hirama C., Nakamura Y., Ogasawara N.,
                                                                                                                                                                                                                                                                                                                                                                                                           Bacillus halodurans.
Bacteria; Firmicutes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; AE003459; AAF46958.2; ALT SEQ
                                                                                                                                                                                                                                                            Horikoshi K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  UDK OR BH1275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    monophosphokinase).
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                                                                                                        PATHWAY: Pyrimidine salvage pathway.
SUBCELLULAR LOCATION: Cytoplasmic (By similarity).
SIMILARITY: BELONGS TO THE URIDINE KINASE FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          91 LLSLITRWYORSRFIRIWNQILALVRDRPQVVRGRWYRR
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non-profit
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A
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EXTRACELLULAR (POTENTIAL).

5 (POTENTIAL).

CYTOPLASMIC (POTENTIAL).

6 (POTENTIAL).

EXTRACELLULAR (POTENTIAL).

7 (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 61; DB
Pred. No. 0.94
LO; Mismatches
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2 (POTENTIAL).
EXTRACELLULAR (POTENTIAL).
3 (POTENTIAL).
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CYTOPLASMIC (
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monophosphokinase)
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                                                                                                                                                                                                                                                                             Sasaki R.,
., Kuhara S
                                                                                                                                                                 + CMP.
                                                                                                                                                                                                                                          bacterium
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                                restrictions on it
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (Cytidine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18
                                                                     a collaboration
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RESULT 5
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Best Local S
Matches 21
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01-NOV-1995
01-NOV-1995
                                                                                  This SWISS-PROT entry is copyright. It is product between the Swiss Institute of Bioinformatics the European Bioinformatics Institute. There as use by non-profit institutions as long as it modified and this statement is not removed. Use entitles requires a license agreement (See http or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR004912; Adeno Pfam; PF03228; Adeno VII; Tenore 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
             InterPro; IPR001737; RRNA A dimeth
InterPro; IPR000051; SAM bind.
Pfam; PF00398; RrnaAD; 1.
                                                                                                                                                                                                                                                                                           J. Bacteriol. 170:1800-1811(1988).
-!- FUNCTION: THIS PROTEIN PRODUCES A DIMETHYLATION RESIDUE AT POSITION 2058 IN 23S RRNA, RESULTING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-NOV-1995 (Rel. 32, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
rRNA adenine N-6-methyltransferase (EC 2.1.1.48)
lincosamide-streptogramin B resistance protein) (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Streptomyces fradiae.
Bacteria; Actinobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                        EMBL; M19269; AAA26742.1;
                                                                                                                                                                                                                                                                                                                                            fradiae."
                                                                                                                                                                                                                                                                                                                                                    "Translational attenuation control of ermSF, an inducible resistance determinant encoding rRNA N-methyltransferase from Streptomyces
                                                                                                                                                                                                                                                                                                                                                                                    Kamimiya S., Weisblum B.;
                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=NRRL 2338;
MEDLINE=88169508; PubMed=3127381;
                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Actinomycetales;
NCBI_TaxID=1906;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ERMSF OR TLRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 resistance protein).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; U70921; AAC83411.1; -.
                                                                                                                                                                                                                      homocysteine + rRNA
SIMILARITY: BELONGS
                                                                                                                                                                                                                                                  ANTIBIOTICS.
CATALYTIC ACTIVITY:
                                                                                                                                                                                                          FAMILY.
                                                                                                                                                                                                                                                                                 AFFINITY BETWEEN RIBOSOMES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRFR
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24
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Streptomycineae;
RRNA A DIMETH;
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25
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                                                                                                                                                                                                                     S-adenosyl-L-methionine + rRNA = S-adenosy
containing N(6)-methyladenine.
TO THE RRNA ADENINE N-6-METHYLTRANSFERASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MW.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Actinobacteria (class); Actinobacteridae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VII.
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Pred. No. 0
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MAJOR CORE PROTEIN.
CLEAVAGE (BY ADENOVIRUS PROTEASE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (POTENTIAL)
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                                                                                                                                                                        It is produced through a collaboration
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                                                                                                  (See http://www.isb-sib.ch/announce/
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N REDUCED
E-STREPTOGRAMIN
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RESULT 7
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Matches
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                                    G59C DROME
Q9W1U5;
15-JUN-2002
15-JUN-2002
15-JUN-2002
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01-NOV-1997
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                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pieniazek N.J., Slemenda S.B., Pieniazek D., Luftig R.B. Submitted (FEB-1992) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Viruses; dsDNA viruses,
NCBI_TaxID=28284;
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PVII.
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Pfam; PF03228; Adeno_VII;
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EMBL; M86665; AAA42526.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   entities requires a license agreement (S or send an email to license@isb-sib.ch).
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OR GR59D.2 O
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Pred. No.
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Best Local
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P56877;
30-MAY-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Molecular basis of symbiosis between Rhizobium and legumes.";
Nature 387:394-401(1997).
-!- SIMILARITY: BELONGS TO THE SITE-SPECIFIC RECOMBINASE RESOLVASE
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SEQUENCE FROM N.A.
MEDLINE=97305956; PubMed=9163424;
Preiherd C.A., Fellay R., Bairoch
                                                                                                                                                                                                          30-MAY-2000 (Rel. 39, Created)
30-MAY-2000 (Rel. 39, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Hypothetical PE-PGRS family protein Rv0278c p
RV0278C OR MT0291 OR MTV035.06C.
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                                                                                                                                        Bacteria; Actinobacteria; Actinomycetales; Coryneba
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STRAIN=H37Rv;
                                                                                                                                                                                        Mycobacterium tuberculosis
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PROSITE; PS00398; RECOMBINASES_2; 1.
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                          MEDLINE=98295987;
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23 23
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                                                                                                                                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                     bacteria; Actinobacteria (class); Acti
Corynebacterineae; Mycobacteriaceae;
  PubMed=9634230;
R., Parkhill J.,
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Pred. No. 0.
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  Garnier
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is posture the Swiss Institute of Bioinformatiche European Bioinformatics Institute. The use by non-profit institutions as long a modified and this statement is not removed. entities requires a license agreement (See )
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Fleischmann R.D., Alland D., Eisen J.A., Carpenter L., White O.,
Peterson J., DeBoy R., Dodson R., Gwinn M.L., Haft D., Hickey E.,
Kolonay J.F., Nelson W.C., Umayam L.A., Ermolaeva M.D., Salzberg
Delcher A., Utterback T., Weidman J., Khouri H., Gill J., Mikula
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EMBL; AE006936;
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Submitted (APR-2001)
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Nature 393:537-544(1998).
                                                                 Human adenovirus type 4 Viruses; dsDNA viruses,
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TubercuList; Rv0278c;
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Nucleic Acids Res. 28, 4317-4331, 2000
A;Title: Complete genome sequence of the alkaliphilic bacterium A;Reference number: A83650; MUID:20512582; PMID:11058132
A;Status.
                                                                              msbA-like saccharide exporting ABC transporter protein, consisting of ATP-b C;Species: Sinorhizobium meliloti
C;Date: 24-Aug-2001 #sequence_revision 24-Aug-2001 #text_change 30-Sep-2001
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A;Title: Extension of the Rhizobium meliloti succinoglycan
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C;Species: Rhizobium meliloti
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A;Molecule type: DNA
A;Residues: 1-604 <KUR>
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A;Accession: S60182
 A;Experimental source: strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Superfamily: unassigned ATP-binding cassette proteins; keywords: ATP, nucleotide binding; P-loop; 5971-565/Domain: ATP-binding cassette homology <ABC>;388-395/Region: nucleotide-binding motif A (P-loop)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;Cross-references: EMBL:Z50189; NID:g1143532; PIDN:CAA90568.1; PID:e191488;;Note: it is uncertain whether Met-1 (ATG), Val-29 (GTG) or Met-74 (ATG) is
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                  PIDN:CAC49464.1; PID:g15140950; GSPDB:GN00167
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Pred. No.
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Pred. No. 18;
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                                                                                                                                                             P.; Vorholter, F.J.; Herna
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C;Accession.
R;Parkhill, J.; Wren, B.w., ....
R;Parkhill, J.; Wren, B.w., ....
R;Parkhill, J.; Wren, B.w., ....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Authors: Kahn, D.; Kahn, M.L.; Kalman, S.; Keating, D.H.; Kiss, E.; Komp, C.; Lelaure, hebault, P.; Vandenbol, M.; Vorholter, F.J.; Weidner, S.; Wells, D.H.; Wong, K.; Yeh, K. A;Title: The composite genome of the legume symbiont Sinorhizobium meliloti.
A;Reference number: A96039; MUID:21368234; PMID:11474104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              pela, D.; Chain, P.; Cow
L.; Hyman, R.W.; Jones,
Science 293, 668-672, 20
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A;Gene: exsA; SMb20941
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                                                                                                                                                          A; Cross-references:
                                                                                                                                                                          A; Molecule type: DNA
A; Residues: 1-778 < KUR >
                                                                                                                                                                                                                                  A; Accession: AD0432
                                                                                                                                                                                                                                                   A;Title: Genome sequence of Yersinia pestis, the causative agent of plague. A;Reference number: AB0001; MUID:21470413; PMID:11586360
                                                                                                                                                                                                                                                                                          Nature 413, 523-527, 2001
                                                                                                                                                                                                                                                                                                                                                                                     C; Date: 02-Nov-2001
                                                                                                                                                                                                                                                                                                                                                                                                    C;Species:
                                                                                                                                                                                                                                                                                                                                                                                                                     aerobic respiration
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                                                                                                                                                                                                                                                                                                       il, M.; Rutherford, K.;
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                                                                                                Superfamily: aerobic respiration
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           Matches
                                            Query Match
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         10;
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                            Similarity
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#sequence_revision 02-Nov-2001 #text_change 27-Nov-2001
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                                                                                                                                                                                                                                                                                                       B.W.; Thomson, N.R.; Titball, R.W.; Holden, M.T.G.; Prentice, thillingworth, T.; Cronin, A.; Davies, R.M.; Davis, P.; Dougan, S.; Simmonde, M.; Skelton, J.; Stevens, K.; Whitehead, S.; Barry
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                           23.6%;
Score 59; UB .
Pred. NO. 22;
6; Mismatches
                                                                                                                                                          PIDN:CAC92784.1;
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submitted to GenBank, June 2000

A; Authors: Ferrica, V.C.A.; Ferroc, J.A.; Fraga, J.S.; Franca, S.C.; Franco, M.C.; Frohn A; Authors: Ferrica, V.C.A.; Ferroc, J.E.; Kitajima, J.P.; Krieger, J.E.; Kuramae, E.E.; Laigi J.D.; Junqueira, M.L.; Kemper, E.L.; Kitajima, J.P.; Krieger, J.E.; Kuramae, E.E.; Mayaki, C.P.; A; Authors: Martins, E.M.F.; Madeira, H.M.F.; Marino, C.L.; Marques, M.V.; Martins, I.A.; Authors: Martins, E.M.F.; Matsukuma, A.Y.; Menck, C.F.M.; Miracca, E.C.; Miyaki, C.Y., F.G.; Nunes, L.R.; Oliveira, M.A.; de Oliveira, M.C.; de Oliveira, R.C.; Palmieri, D.F. F.G.; Nunes, V.; Roda; A.J. de M.; de Rosa Jr., V.E.; de Sa, R.G.; Santelli, R.V.; Sawasal A; Authors: da Silva, A.C.R.; da Silva, F.R.; da Silva, A.M.; Silva Jr., W.A.; da Silvei, Tsuhako, M.H.; Vallada, H.; Van Sluys, M.A.; Verjovski-Almeida, S.; Vettore, A.L.; A.B.; M. S.; Vettore, A.L.;
                                                                                                                                                                                                                                   Gene 53, 73-83, 1987
A;Title: Cloning and nucleotide sequence of a carbomycin-resistance
A;Reference number: A26512; MUID:87248111; PMID:3036668
                                                                                                                                                                                                                                                                                                                        C;Species: Streptomyces sp.
C;Date: 11-Mar-1988 #sequence_revision 11-Mar-1988
C;Accession: A26512
R;Epp, J.K.; Burgett, S.G.; Schoner, B.E.
                                                                                                                                                           A; Status: preliminary
A; Molecule type: DNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Title: The genome sequence of the plant pathogen Xylella fastidiosa A;Reference number: A82515; MUID:20365717; PMID:10910347
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Nature 406, 151-157, 2000
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                                                                                                                                       A;Residues: 1-299 <EPP>
                                                                                                                                                                                                                  A; Accession: A26512
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                                                                                Cross-references: GB:M16503; NID:g153199; PIDN:AAC32026.1; PID:g153200;Superfamily: rRNA (adenine-N6-)-methyltransferase
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Cross-references: GB:AE003892; GB:AE003849; NID:g9105243; PIDN:AAF83221.1;
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Pred. No. 4.8;
9; Mismatches
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Pred. No. 1.6;
  Score 63
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                                                                                RESULT 12
C83809
uridine kinase udk [imported] - Bacillus halodurans (strain C-125)
C;Species: Bacillus halodurans
C;Date: 01-Dec-2000 #sequence_revision 01-Dec-2000 #text_change 15
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C;Superfamily: rRNA (adenine-N6-)-methyltransferase
C;Keywords: methyltransferase; S-adenosylmethionine
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                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: DNA
A; Residues: 1-319 < KAM>
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C;Date: 30-Jun-1989 #sequence_revision
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A;Experimental source: strain H37Rv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Authors: Sqares, R.; Sulston, J.E.; Taylor, K.; Whitehead, S.; Bar A;Title: Deciphering the biology of Mycobacterium tuberculosis from A;Reference number: A70500; MUID:98295987; PMID:9634230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nature 393,
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Best Local
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;Species: Mycobacterium tuberculosis
;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 20-Jun-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S.; Weisblum, B.
1. 170, 1800-1811,
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Pred. No. 4
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#text_change 15-Jun-2001

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RESULT 5
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hypothetical
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C;Species: Chlorella virus PBCV-1
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A;Accession: T17699
                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: EMBL:U19866; NID:g644828; PIDN:AAA68695.1; PID:g644829 R;Link, W.; Konietzko, U.; Kauselmann, G.; Krug, M.; Schwanke, B.; Frey, U.; Kuhl, D. Proc. Natl. Acad. Sci. U.S.A. 92, 5734-5738, 1995 A;Title: Somatodendrilic expression of an immediate early gene is regulated by synaptic A;Title: Somatodendrilic expression of an immediate early gene is regulated by synaptic A;Reference number: I59386; MUID:95296386; PMID:7777577
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                                                                                                                                                                                                                                                                                                                                                                                Nolecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R;Lyford, G.L.; Yamagata, K.; Kaufmann, W.E.; Barnes, C.A.; Sanders, L.K.; Copeland, N.
Neuron 14, 433-445, 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Species: Rattus norvegicus (Norway rat);Date: 26-Jul-1996 #sequence_revision 26;Accession: I58168; I59386
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  [imported]
                                                                                                                                                                                     Score 66.5; DB
Pred. No. 1:8;
8; Mismatches
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Pred. No. 0.41;
9; Mismatches
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  Arabidopsis thaliana
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awa, H.; Takamiya, h.; husuur, -...
DNA Res. 6, 83-101, 1999
A;Title: Complete genome sequence of an aerobic hyper-thermophilic Crenarchaeon, Aeropy.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nypothetical protein APE1008 - Aeropyrum pernix (strain K1)
C;Species: Aeropyrum pernix
C;Date: 20-Aug-1999 #sequence_revision 20-Aug-1999 #text_change 09-Jun-2000
C;Accession: H72698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Title: Sequence and analysis of chromosome 2 of the plant Arabidopsis thaliana A;Reference number: A84420; MUID:20083487; PMID:10617197 A;Accession: C84477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 02-Feb-2001 #sequence_revision 02-Feb-2001 #text_change 02-Feb-2001
C;Accession: C84477
                                                                                                                     R;Yogev, D.; Rosengarten, R
EMBO J. 10, 4069-4079, 1991
A;Title: Molecular basis of
                                                                                                                                                                                                     hypothetical protein - Mycoplasma hyorhinis
C;Species: Mycoplasma hyorhinis
C;Date: 22-Nov-1993 #sequence_revision 14-Jul-1995 #text_change 07-Dec-1999
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A;Molecule type: DNA
A;Residues: 1-168 <YOG>
A;Cross-references: EMBL:X62936
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A;Cross-references: DDBJ:AP000060; NID:g5104188; PIDN:BAA79992.1; PID:d1043778; PID:g51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: DNA
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                                                                                                     A;Title: Molecular basis of Mycoplasma suri
A;Reference number: S18651; MUID:92097525;
                                                                                                                                                                                        C;Accession:
                                                              A;Status: translation not
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;Residues: 1-349 <STO>
                                                                                    Accession: S18655;
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H.; Takamiya, M.; Masuda, S.; Funahashi, T.; Tanaka,
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
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                                                                 shown
                                                                                                                                                                R.; Watson-McKown, R.; Wise, K.S
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Pred. No.
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525; PMID:1721868
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | ų | 80 | 7 | σ | v | 4 | u | N | 1 | No. | Result |
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| 56 | 56 | 56 | 56 | 56 | 56 | | 57 | 57 | 57 | 57.5 | 57.5 | 58.5 | 58.5 | 59 | 59 | 59 | 59 | 62.5 | 63 | 63.5 | 64 | 64 | 64.5 | 65 | 66.5 | 89 | 73 | 76 | Score | |
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| 1067 | 702 | 477 | 104 | 62 | 58 | 221 | 778 | 778 | 776 | 506 | 505 | 287 | 141 | 778 | 604 | 604 | 211 | 319 | 957 | 299 | 584 | 168 | 123 | 349 | 396 | 114 | 1538 | 111 | Length | |
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| T18196 | T13427 | T15916 | B82294 | S10754 | S10755 | S21333 | D85985 | A91140 | RGECAR | T19973 | T19971 | T01758 | H85217 | AD0432 | H95974 | S60182 | C83809 | A27741 | D70835 | A26512 | B82810 | S18655 | H72698 | C84477 | I58168 | T17699 | H70846 | T14306 | ID | |
| pol protein - silk | _ | | hypothetical prote | protamine St2a - h | protamine St2b - h | rt | | | ۳. | | | hypothetical prote | hypothetical prote | aerobic respiratio | msbA-like sacchari | ATP-binding transp | uridine kinase udk | rRNA (adenine-N6-) | g | carB protein - Str | rt | | prot | | | \sim | ical | h pro | Description | |

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| H72708 S73607 F70505 AB0471 | T30528 S78342 T06031 | A59251 T08030 D71063 F71341 | T49637 E71451 F90177 T08179 |
| probable ribosomal uridine kinase udk probable trna delt probable undecapre | reverse transcript hypothetical prote hexokinase homolog myosin heavy chain | 0 × 6 | hypothetical prote hypothetical prote hypothetical prote LRGS protein - Chl |

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R;Lin, X.; Hwang, G.J.; Zimmerman, J.L.
submitted to the EMBL Data Library, January 1996
A;Description: Isolation and characterization of a diverse
A;Reference number: Z17968
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                                                                                                                                                     A;Cross-references: EMBL:U47097; NID:g1276970; PID:g1276971
A;Experimental source: strain Danver Half-long
                                                                                                                                                                                                                                                                                                                                                 C;Date: 20-Sep-1999 #sequence_revision 20-Sep-1999
C;Accession: T14306
                                                                                                                                                                                                                                                                                                                                                                                   glycine-rich protein - carrot (fragment)
C;Species: Daucus carota (carrot)
                                                                                                                                                                                         A; Molecule type: mRNA
A; Residues: 1-111 <LIN>
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                                                                                           Best
                                                                           Matches
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65
                                   8 RWVRRVRVW-RRVVRVVRRWVRRVRR--VWRRVVRVVRRWRVV 48
                                                                                           Similarity
RWRRRRRWWRRRRRRSSRRWCRLRRRCWFWRR----SRWPLI
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                                                                                           30.4%;
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Pred. No. 0.051;
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hypothetical glycine-rich protein Rv3345c - Mycobacterium tuberculosis (strain H37RV) C;Species: Mycobacterium tuberculosis C;Date: 17-Ju1-1998 #sequence_revision 17-Ju1-1998 #text_change 20-Jun-2000

C;Accession: H70846
R;Cole, S.T.; Brosch, R.; Parkhill, J.; Garnier, T.; Churcher, C.; Harris, D.; Gordon, R;Cole, S.T.; Brosch, R.; Devlin, K.; Feltwell, T.; Gentles, S.; Hamlin, N.; Holroyd, Connor, R.; Davies, R.; Devlin, K.; Seeger, K.; Skelton, S.; Squares, S. Rajandream, M.A.; Rogers, J.; Rutter, S.; Seeger, K.; Skelton, S.; Squares, S. Nature 393, 537-544, 1998
A;Authors: Sqares, R.; Sulston, J.E.; Taylor, K.; Whitehead, S.; Barrell, B.G. A;Title: Deciphering the biology of Mycobacterium tuberculosis from the complete genom A;Reference number: A70500; MUID:98295987; PMID:9634230
A;Accession: H70846 Gordon,

genome

A;Status: preliminary; nucleic acid sequence not shown; translation not shown A;Molecule type: DNA A;Molecule type: DNA A;Residues: 1-1538 <COL>
A;Cross-references: GB:ALO21841; GB:ALI23456; NID:g3261517; PIDN:CAA17117.1; PID:g32615A;Experimental source: strain H37Rv

A;Gene: Rv3345c C;Superfamily: collagen alpha 1(IV) chain

Query Match Best Local S Matches 21 Similarity 44.7%; 29.2%; Score 73; Pred. No. DB 2; Length 1538;

Conservative

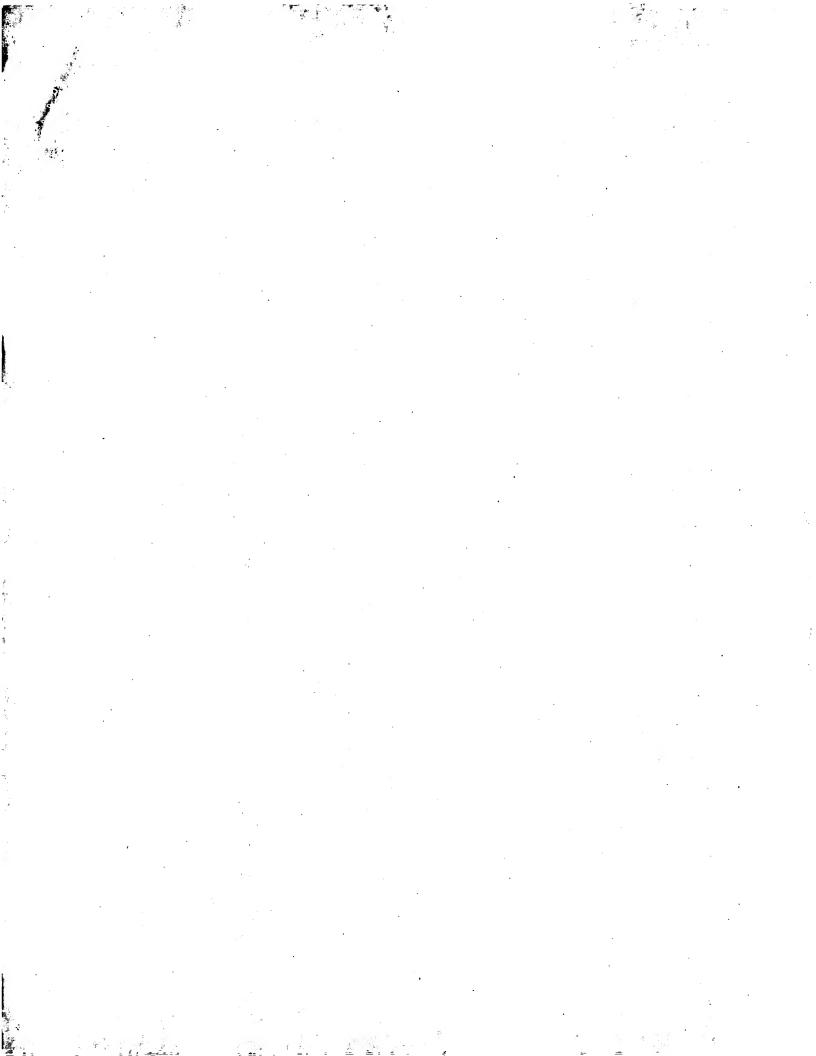
4

Mismatches

Indels

8

Gaps



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US-08-932-682-160

Query Match
Best Local Similarity 42.3%; Pred. No. 5.9;
Matches 11; Conservative 7; Mismatches 8; Indels 0; Gaps 0;

Qy 7 RVVVVRRWVRRVVRRVVRR 32

Q| ||:|||: ||: :||
Db 1 RVIRVVQGACRAIRHIPRRIRQGIRR 26

Search completed: June 9, 2003, 12:05:10

Job time: 13.2553 secs
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                                                                                                                                                                                                                                                                                                                                                    RESULT 14
US-08-786-748A-160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; ORGANISM: Pseudomonas aeruginosa US-09-199-637A-289
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                                                                                                                                                                                                                                                                                                                  Sequence 160, Application US/08786748A Patent No. 5714577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: VIRULENCE-ASSOCIATED NUCLEIC ACID TITLE OF INVENTION: SEQUENCES AND USES THEREOF FILE REFERENCE: 00786/361002 CURRENT APPLICATION NUMBER: US/09/199,637A CURRENT FILING DATE: 1998-11-25 PRIOR APPLICATION NUMBER: 60/066,517 PRIOR EFILING DATE: 1997-11-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
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                                                                            COMPUTER READABLE FORM: MEDIUM TYPE: Diskette
              SOFTWARE: FastSEQ Version 2.0 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                   APPLICANT: Tencza, Sarah B.
APPLICANT: Mietzner, Timothy A.
TITLE OF INVENTION: NOVEL ANTIMICROBIAL PEPTIDES
                                                                                                                                                                                                                       NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                              APPLICANT: Ronald, Montelaro C.
                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
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                                           OPERATING SYSTEM:
                                                                                                                                                                         STREET:
AP#LICATION NUMBER:
                                                                                                                          COUNTRY:
                                                                                                                                                                                        ADDRESSEE:
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16; Conserv
                                                                                                                                                           New York
                                                                                                             10112-0228
                                                                                                                                         New York
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Mahajan-Miklos, Shalina
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ausube
                                                                                                                                                                         E: Brumbaugh, Graves, Donohue & Raymond
30 Rockefeller Plaza
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                                              IBM Compatible SYSTEM: DOS
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US/08/786,748A
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Pred. No. 17
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Patent No. 5945507
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 160,
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TELEFAX: 212-765-2519
INFORMATION FOR SEQ ID NO:
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SEQUENCE CHARACTERISTICS
                                                                        CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION UMBER: 08/786
APPLING DATE: 24-JAN-1997
ATTORNEY/AGENT INFORMATION:
NAME: ROCHALLE K. Seide
REGISTRATION NUMBER: 32,30
                                                                                                                                                                                                                 SOFTWARE: FastSEQ Version 2.0
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
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                                            REFERENCE/DOCKET NUMBER: AI TELECOMMUNICATION INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Ronald, APPLICANT: Tencza,
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                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                             STREET:
                                                                                                                                                                                                                                                     COMPUTER: IBM CONCERNING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                             PLICANT: Mietzner, Timothy A.
TLE OF INVENTION: NOVEL ANTIMICROBIAL PEPTIDES
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                             TELEPHONE:
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                               212-705-5000
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                                                                                                                                                                                                                                                                                      Diskette
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Montelaro C.
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42.3%; Pred. No. 5.
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                                                                                                                                        08/786,748
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SEQUENCE CHARACTERISTICS

ENGTH:

28 amino acids

STRANDEDNESS:

linear

single

amino acid

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APPLICANT: ARTHUR,
APPLICANT: MOLINAS
APPLICANT: COURVAL
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                                                                                                                                                                                        PILING DATE: 29-OCT-1991
                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 05-AUG-
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLÉ FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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LENGTH: 31 amino acids
TYPE: amino acid
                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 9013579
                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                 ATTORNEY/AGENT INFORMATION:
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                                                                 ELECOMMUNICATION INFORMATION:
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                                                                                   NAME: Oblon, No. 5871910man F. REGISTRATION NUMBER: 24,618 REFERENCE/DOCKET NUMBER: 660-0
                                                                                                                                                       CLASSIFICATION:
                                 TELEFAX:
                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US 08/174,682
FILING DATE: 28-DEC-1993
CLASSIFICATION: 435
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                                                 TELEPHONE:
                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US 07/917,146 FILING DATE: 10-AUG-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
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l Similarity 42.9%;
12; Conservation
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248855 OPAT UR
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1755 S. Jefferson Davis Highway, Suite 400
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       U.S.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT
                                                   (703)
                                                                                                                                                                 31-OCT-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                05-AUG-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EXPRESSION OF RESISTANCE TO GLYCOPEPTIDES, IN PARTICULAR IN GRAM-POSITIVE BACTERIA, NUCLEOTIDE SEQUENCE CODING FOR THESE POLYPEPTIDES AND USE FOR DIAGNOSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           POLYPEPTIDES IMPLICATED IN THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            54
                                                                                                                                                                                                                                                                                                                                                                                                                                              US/08/286,819A
                                                                                   660-060-0 PCT
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Matches
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                                                                                                                                                                                                                                                       FILING DATE: 28-DEC-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/
FILING DATE: 10-AUG-1992
PRIOR APPLICATION NUMBER: PCT/FR
APPLICATION NUMBER: PCT/FR
                                           TELEX: 248855 OPAT UR
        SEQUENCE CHARACTERISTICS
LENGTH: 2254 amino ac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
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                                                                                                                                                           ATTORNEY/AGENT INFORMATION: NAME: Oblon, No. 6013508
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                           FILING DATE: 29-OCT-: PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: 435
PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US 01
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                                                                        TELEPHONE: (703) 413-300
TELEFAX: (703) 413-2220
                                                                                                                           REGISTRATION NUMBER: 24, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 05-AUG
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: Arlington
STATE: Virginia
COUNTRY: U.S.A.
                                                                                                                                                                                                           APPLICATION NUMBER:
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amino acic
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3Y: linear
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                2254 amino acids
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1755 S. Jefferson Davis Highway, Suite 400
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT
                                                                                              (703) 413-3000
                                                                                                                                                                                                                                            29-OCT-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Floppy disk
                                                                                                                                                       No. 6013508man F.
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                                                                                                                              660-060-0 PCT
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Pred. No. 2.5e+02;
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                                                                                                                                                                                                                                                                                                                                  Matches
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                                                                                                                                                                    Sequence 9, Application US/08440174A Patent No. 5717061
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APPLICANT: Rao, A
                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS LENGTH: 31 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY: linear MOLECULE TYPE: protein
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APPLICATION NUMBER: 0
FILING DATE: 06/18/93
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                                                                       CORRESPONDENCE ADDRESS
                                                                                         TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                    APPLICANT: Rao, Gururaj A. APPLICANT: Zhong, Lingxiu
                                                                                                                                                                                                                                                                                                                                                 Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REGISTRATION NUMBER:
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                             Johnston
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             Iowa
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                                            7100 N.W. 62nd Avenue
USA
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SYSTEM: MS-DOS/Microsoft Windows
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)O Capital Square, 400 Locust Street
                                                          PIONEER HI-BRED INTERNATIONAL, INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (515)
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SYNTHETIC ANTIMICROBIAL PEPTIDES
                                                                                         SYNTHETIC ANTIMICROBIAL PEPTIDES: 22
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                                                                                                                                                                                                                                                                                                                                             27.4%;
42.9%;
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Pred. No. 3.9;
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Matches 12; Conserv
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS
REGISTRATION NUMBER:
REFERENCE/DOCKET NUMBER:
23
TELECOMMUNICATION INFORMATION:
TELEPHONE: (515) 248-4800
TELEPAX: (515) 248-4844
INFORMATION FOR SEQ ID NO: 9:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 530
PRIOR APPLICATION NUMBER: US 08/079,512
APPLICATION NUMBER: US 08/079,512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: Yates, Michael E.; Sweeney, Patric
NAME: Roth, Michael J.; & Simon, Soma G
                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF TAKE ADDRESS:
CORRESPONDENCE ADDRESS:
ADDRESSEE: Pioneer Hi-Bred International, Inc.
ADDRESSEE: Pioneer Hi-Bred International, Inc.
                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                  SOFTWARE: Microsoft Windows Notepad CURRENT APPLICATION DATA:
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MEDIUM TYPE: Diskett
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (515) 248-4896
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NAME: Bobrowicz, Donna
REGISTRATION NUMBER: 32,
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                                                                                                                                                                                                                                                                                                   OPERATING SYSTEM: MS-DOS/Microsoft Windows SOFTWARE: Microsoft Windows Notepad
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                                                                                                                                                                                                                             CLASSIFICATION:
                                                                                                                                                                                                                                             APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                        COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                           ZIP: 50309
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Pred. No.
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                                                                                                                                  Patricia A.;
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                                                                                                                                                                                   Sequence 27, Application US/09150812
Patent No. 6395891
GENERAL INFORMATION:
APPLICANT: Karn et al.
                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
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APPLICANT: Karn e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: 617-345-9111
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               quence 27, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 31 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REGISTRATION NUMBER: 34,380
REFERENCE/DOCKET NUMBER: 32E
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617-345-9100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: unknown MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 15-APR-1996 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/GB96/78191
FILING DATE: 15-APR-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 43
CORRESPONDENCE ADDRESS:
ADDRESSEE: Banner & Witcoff, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET:
STREET:
STREET:
Maggar
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: WordPerfect 6.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: FILING DATE: 13-MAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/08/8 FILING DATE: April 15, 1997 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: Banner & Witcoff, Inc
COMPUTER READABLE FORM:
                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                     TITLE OF INVENTION:
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                                                                                                                                                                                                                                                                                                                                                          2 RRVWRRVVRVVRRWV----RRVRRVWRR 25
                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
              COUNTRY: USA
ZIP: 02111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kathleen M. Williams
                                                                                                                                                                                                                                                                                                                          RRAWRRAKRRAARRCGVSARRAARRAWRR 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Massachusetts
                                                  STATE: Massachusetts
                                                                 CITY: Boston
                                                                                  STREET: One Financial Center
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                                                                                                                                                                      METHODS AND COMPOSITIONS
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Pred. No. 2.6;
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                                                                              ORGANISM: Sorangium cellulosum US-09-413-814-78
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                                                                                                                                                      EARLIER APPLICATION NUMBER: DE 198 46 493.2
EARLIER FILING DATE: 1998-10-09
NUMBER OF SEQ ID NOS: 107
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 78
Query Match 27.6
Best Local Similarity 53.1
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 78,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Cino, raux.
APPLICANT: Dougherty, Brian A
APPLICANT: Goldberg, Steven L
                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/413,814
CURRENT FILING DATE: 1999-10-07
                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: DNA sequences for enzymatic synthesis of polyketide TITLE OF INVENTION: heteropolyketide compounds FILE REFERENCE: PCT/US 99/23535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Gesellschaft fuer Biotechnologische Forschung mbH
APPLICANT: Bristol-Myers Squibb, Co.
                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Goldberg, Stev
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Bloecker,
                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Mueller, Joachim
APPLICANT: Reichenbach, Hans
                                                                                                                    TYPE: PRT
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                                                                                                                                    ENGTH: 882
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TELEPHONE: 617-345-9100
TELEFAX: 617-345-9111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/839,624
FILING DATE: <UNknown
APPLICATION NUMBER: US 60/017,268
FILING DATE: 13-MAY-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: peptide SEQ ID NO: 27:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
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REGISTRATION NUMBER: 34,380
REFERENCE/DOCKET NUMBER: 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/09/150,812 FILING DATE: 11-Sep-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS: single
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                  27.6%;
; Score 52.5; DI
; Pred. No. 71;
2; Mismatches
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Pred. No. 2.
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                                    DB 4;
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DDRESSEE:

6601 Woodward Avenue

Benita J, Rohm, Esq

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US-08-436-703B-5
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 313-965-1951
INFORMATION FOR SEQ ID NO: 17:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: peptide ORIGINAL SOURCE: ORGANTON
                                                                                                                                                                                                APPLICANT: Wakefield
APPLICANT: Andrews,
APPLICANT: Stanley,
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: 7W
TELECOMMUNICATION INFORMATION:
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk 1.44Mb, 3.5"
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                                                                                                                                                                     TITLE OF INVENTION:
                                                                                                                                                                                                                                                                            FRAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS: N/A
                                                                                                                                                         UMBER OF SEQUENCES:
                                                                                       STREET: 6601 Woodward Avenue STREET: Suite 1525
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STRANDEDNESS: N/
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                                                  COUNTRY:
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                                                  Michigan
7: United States of America
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        38 amino acids
                                                                                                                                                                                     Stanley, James C.
VENTION: NOVEL PEPTIDES FOR
VENTION: HEPARIN AND LOW MOLECULAR
VENTION: WEIGHT HEPARIN
                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                           Wakefield, Thomas W. Andrews, Philip C.
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Benita J.
7077 28,664
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08-MAY-1995
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                                                                                                                        Rohm, Esq.
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Pred. No. 1;
0; Mismatches
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                                                           Best Loc
Matches
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SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1, Application US/08995172B Patent No. 6218112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
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                                                                                          Query Match
                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/08/995,1728
CURRENT FILING DATE: 1997-12-22
EARLIER APPLICATION NUMBER: 60/033,908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: 313-965-1951 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: Optimization of Gene Delivery and Gene Delivery Systems FILE REFERENCE: CACO0026
                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Thatcher, David R
APPLICANT: Wilks, Paula E
                                                                                                                                                                                                                                                                  EARLIER FILING DATE: 1996-12-23
                                                                                                                                       OTHER INFORMATION: Description of Artificial Sequence: Peptide
                                                                                                                                                                   TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                         FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGANISM: N/A
ORGANISM: N/A
PUBLICATION INFORMATION:
***THORS: N/A
                                                                                                                                                                                                       ENGTH: 31
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: N/A
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LENGTH: 39 amino acids
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REFERENCE/DOCKET NUMBER: 7W
TELECOMMUNICATION INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS: N/A
                                                                        Local Similarity
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Similarity 51.9%;
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ASCII (DOS) Text
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US-08-413-19-632-9
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Sequence 31, Appl Sequence 17, Appl Sequence 5, Appli Sequence 27, Appl Sequence 27, Appl Sequence 27, Appl Sequence 9, Appli Sequence 9, Appli Sequence 9, Appli Sequence 28, Appl Sequence 28, Appl Sequence 160, App Sequence 160, App Sequence 28, Appl Sequence 28, Appl Sequence 39, Appl Sequence 31, Appl Sequence 39, Appl Sequence 31, Appl Sequence 31,
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US-08-436-703B-17
US-08-436-703B-17
IS-08-436-703B-17
IS-08-436-70

| Qy 2 RRVWRRVVR-VVR | Query Match 31.1%; Score 59; DB 4; Length 770; Best Local Similarity 30.5%; Pred. No. 12; Matches 18; Conservative 4; Mismatches 9; Indels 28; Gaps | ENGTH: PE: PR RGANISM -245-24 | F SEQ ID NOS: : FastSEQ for | ; FILE REFERENCE: 6461.US.01 ; CURRENT APPLICATION NUMBER: US/09/245,248B ; CURRENT FILING DATE: 1999-02-05 | CANT: Musha | Pilot-Matia Desai, Sure | : Muerhoff, Scot | : Simons, John | : Erker, Jai | APPLICANT: Abbott Laboratories APPLICANT: Leary Thomas | ; sequence 31, Application 03/092432468 ; Patent No. 6395472 ; GENERAL INFORMATION: | 2488-31 | ALIGNMENTS | 6.5 24.5 442 4 US-09-256-976-52 Sequence 52, | 46.5 24.5 442 4 US-08-993-674A-52 Sequence | 2 46.5 24.5 263 4 US-09-256-9/6-51 Sequence 51, | 1 46.5 .24.5 263 4 US-08-993-674A-51 Sequence 51, | 9 46.5 24.5 263 2 US-08-557-309B-51 Sequence 51, | 46.5 24.5 262 2 US-08-929-414-1 Sequence.1, | .5 24.5 240 4 US-09-527-657-10 Sequence 10, | 46.5 24.5 240 3 | 46.5 24.5 240 1 US-08-414-926A-10 Sequence 10, | 46.5 24.5 134 3 US-08-513-974B-328 Sequence 328 | 47 24.7 43 5 PCT-US95-00062-6 Sequence 6, I | 47 24.7 43 | 47 24 7 43 1 110-08-148-632-6 Company |
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Search completed: June 9, 2003, 12:31:39
Job time : 47.5957 secs
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                                                                                                                                                                                                                                                                                                     ; NAME/KEY: MISC FEATURE
; LOCATION: (342). (342)
; OTHER INFORMATION: X=any amino acid
US-10-282-122A-49117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 78614
SOFTWARE: PatentIn version 3.1
SEQ ID NO 49117
LENGTH: 360
                                                                                                                                                                                               Query Match 32.6%; Score 62; DB 6; Length 360; Best Local Similarity 36.4%; Pred. No. 1.2e+02; Matches 16; Conservative 4; Mismatches 12; Indels
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CURRENT FILING DATE: 2003-02-20
CURRENT FILING DATE: 2003-01-11,078
PRIOR APPLICATION NUMBER: 60/191,078
PRIOR FILING DATE: 2000-03-21
PRIOR APPLICATION NUMBER: 60/206,848
PRIOR FILING DATE: 2000-05-23
PRIOR FILING DATE: 2000-05-23
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ITTLE OF INVENTION: Identification of Essential Genes in Microorganisms
FILE REFERENCE: ELITRA.034A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
ORGANISM: Burkholderia fungorum
                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: MISC FEATURE
LOCATION: (272)..(272)
OTHER INFORMATION: X=any amino acid
FEATURE:
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NAME/KEY: MISC FEATURE
LOCATION: (270)...(270)
OTHER INFORMATION: X=any amino acid
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FILING DATE: 2000-11-27
APPLICATION NUMBER: 60/257,931
FILING DATE: 2000-12-22
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FILING DATE: 2000-09-06
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/269,308
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APPLICATION NUMBER: 60/242,578
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CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 73128
SEQ ID NO 53360
LENGTH: 107
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LENGTH: 692
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                                                                          Sequence 56955, Appl GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                           Query Match
Best Local
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                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: JP 2001-204089
PRIOR FILING DATE: 2001-05-30
PRIOR APPLICATION NUMBER: JP 2001-272697
PRIOR FILING DATE: 2001-08-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SENERAL INFORMATION:
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CURRENT APPLICATION NUMBER: US/10/156,761
CURRENT FILING DATE: 2002-05-29
APPLICANT: Liu, Jingdong
APPLICANT: Zhou, Yihua
APPLICANT'S ,Kovalic, David K.
APPLICANT: Screen, Steven E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement FILE REFERENCE: 38-21(53313)B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 15109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Liu, Jingdong
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PPLICANT: HORIKAWA, HIROSHI
PPLICANT: SHIBA, TADAYOSHI
PPLICANT: SAKAKI, YOSHIYUKI
PPLICANT: HATTORI, MASAHIRA
PPLICANT: HATTORI, MOEL POLYNUCLEOTIDES
                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Clone ID: 700155612_FLI.pep
                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
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                                                                                                                                                                                               36 VVRRAAVLGRW--RVRRRWRDVRRRRRAVGLLARRWVAR 72
                                                                                                                                                                                                                                     8 VVR---VVRRWVRRVRRVWRRVVR-----VVRRWVRR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                           Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VVRVVRRWVRR----VRRVWRRVVRV 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cao, Yongwei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kovalic, David K. Screen, Steven E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tabaska, Jack E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Zhou,
                                                                                                                                                                                                                                                                           Conservative
                                                                                              Application US/10425114
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Pred. No. 46;
2; Mismatches
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Pred. No. 1.3e+02;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 73128
SEQ ID NO 52367
LENGTH: 139
TYPE: PRT
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Best Local
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APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(53313)B
CURRENT APPLICATION NUMBER: US/10/425,114
CURRENT FILING DATE: 2003-04-28
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ORGANISM: Zea mays
                                                      APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                              Malone, Cheryl
Malone, Cheryl
---1heck, Robert
                                                                                                                                                                                                                                                                                                          RRWR----RRLRRWPWRLRRWRLWRWRRRLRWWQPRRRWLRQ 44
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Kovalic, David K.
Screen, Steven E
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Yamamoto, R
Forsyth, R.
                                                  Wall, Daniel
Trawick, John
                                                                                      Ohlsen, Kari
Zyskind, Judith
                                 Carr, Grant
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Pred. No.
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Pred. No. 46;
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US-10-057-498-24220
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US-10-057-498-24220
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                                                                       Matches
                                                                                                       Query Match
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SEQ ID NO 8227
LENGTH: 396
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                                                                                                                                                    ORGANISM: Rattus norvegicus
PUBLICATION INFORMATION:
DATABASE ACCESSION NUMBER: SWISS-Prot / AAA68695
DATABASE ENTRY DATE: 1998-11-01
                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: US 60/333,347
PRIOR FILING DATE: 2001-11-26
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TITLE OF INVENTION: Compositions and Methods for the Therapy and Diagnosis of Acnes
FILE REFERENCE: 210121.514
                                                                                                                                                                                                                                                                                                                                                             PRIOR FILING DATE: 2001-08-14
PRIOR APPLICATION NUMBER: US 60/346,382
PRIOR FILING DATE: 2001-11-01
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CURRENT FILING DATE: 2001-04-20
NUMBER OF SEQ ID NOS: 29212
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87 WKKSIKACLCRCQETIANLERWVKREMHVWREVFYRLERWADR 129
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                               5 WRRVVRV------VRRWVRRVRRVWRRVVRVVRRWVRR 36
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45.2%;
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                                                                                    Score 65.5;
Pred. No. 61;
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Pred. No. 16;
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Pred. No. 16
                                                                   Mismatches
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                                                                                                   DB 6; Length 396;
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CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 73128
SEQ ID NO 58367
LENGTH: 129
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Best Local Similarity
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SEQ ID NO 8229
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PUBLICATION INFORMATION:
DATABASE ACCESSION NUMBER: Refseq / NP_056008
DATABASE ENTRY DATE: 2002-10-31
                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement FILE REPERENCE: 38-21(53313)B
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PRIOR APPLICATION NUMBER: US 60/333,347
PRIOR FILING DATE: 2001-11-26
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PRIOR FILING DATE: 2001-08-14
PRIOR APPLICATION NUMBER: US 60/346,382
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                                                                                                                                                                                             TYPE: PRT
ORGANISM: Zea mays
FEATURE:
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                                  RRVWRRVVRVVRRWVRRVRRVWRRVVRVVRRW 33
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Screen, Steven E
Tabaska, Jack E
                                                                                                                                                                                                                                                                                                                                                                                                                  Cao, Yongwei
                                                                             Conservative
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-WRWVRRLRRRWR----RRW 25
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                                                                         Score 65; DB (
Pred. No. 28;
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 65.5;
Pred. No. 61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                              DB 6; Length 129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13;
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                                                                             Indels
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RESULT 11 US-10-156-761-12598

Sequence 12598, Application US/10156761

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                                      US-10-419-128-32538
                                                                                                                                                                                                                                                                                                                                                                                                                                 US-10-419-128-32538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; ORGANISM: Pseudomonas aeruginosa
US-10-366-683-32538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 32538
LENGTH: 205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                        Sequence 32538, Appl GENERAL INFORMATION:
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  Query Match
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                                                                                                                                                                                                                               APPLICANT: MARC J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/10/419,128
CURRENT FILING DATE: 2003-04-21
PRIOR APPLICATION NUMBER: US/09/252,991
PRIOR PILING DATE: 1999-02-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT FILING DATE: 2003-02-13
PRIOR APPLICATION NUMBER: 09/252,991
PRIOR FILING DATE: 1999-02-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS: 33142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILE REFERENCE: PATH03-04
CURRENT APPLICATION NUMBER: US/10/366,683
                                                                                                               NUMBER OF SEQ ID NOS:
EQ ID NO 32538
                                                                                                                                                      PRIOR APPLICATION NUMBER: US 60/094,190 PRIOR FILING DATE: 1998-07-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Rubenfield, Marc J.
                                                                                                                                                    PRIOR FILING DATE:
                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: US 60/074,788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: MISC_FEATURE
LOCATION: (90)
OTHER INFORMATION: Xaa equals any of the twenty naturally occurring L-amino
                                                         ORGANISM: Pseudomonas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATI
                                                                                             ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ocal Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            159 RRIWRRARRPRRGSVRGWWRRTPRPGRTAGR--RRWPRR 195
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
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Deloughery, Craig
Bush, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                            Application US/10419128
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      38.2%; Score 72.5; DI 38.2%; Pred. No. 5.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35.8%;
                                                      aeruginosa
  35.8%;
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Pred. No. 21;
1; Mismatches
Score 68;
BB
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Length 205;
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PCT-US02-32727-24220
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SEQ ID NO 24220
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                                         NUMBER OF SEQ ID NOS: 30992
SEQ ID NO 24220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                FILE REFERENCE: 210121.514C1
CURRENT APPLICATION NUMBER: US/09/978,825
CURRENT FILING DATE: 2003-01-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Douglass, John
TITLE OF INVENTION: Compositions and Methods
FILE REFERENCE: 210121.514C1
                                                                                                                                                                                                                                                                                                 APPLICANT:
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              LENGTH: 96
TYPE: PRT
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                                                                                                                                                                                                               PPLICANT
                                                                                                              'ITLE OF INVENTION: Compositions and Methods
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: PRT
ORGANISM: Propioni acnes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ENGTH: 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
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Wang, Siging
Jen, Shyian
Micha
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                                                                                                                                                                                                                Zhang, id-
na, Siqing
                                                                                                                        Douglass, John
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Barth, Brenda
                                                                                                                                        Carter, Darrick
Barth, Brenda
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Bhatia, Ajay
                                                                                                                                                                      Jones, Robert
                                                                                                                                                                                                                                                    Maisonneuve, Jean
                                                                                                                                                                                                                                                                  Persing, Davi
Bhatia, Ajay
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                                                                                                                                                                                   Darin
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                                                                                                                                                                                                                                                                                  David
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 66.5;
Pred. No. 16;
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                                                                                                              for the Therapy and Diagnosis of Acnes
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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         d. No. is the number of results predicted by chance to have a
re greater than or equal to the score of the result being printed,
is derived by analysis of the total score distribution.
    59.5
59.5
59.5
                                                                                                                                                                                                                                                                                                                                                                                                                  65.55
55.55
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72.5
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190
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    40.3
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Copyright (c) 1993 - 2003 Compu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   / cgn2 6/ptodata/1/paa/PCT_NEW_COMB.pep:*
//cgn2 6/ptodata/1/paa/US06_NEW_COMB.pep:*
//cgn2 6/ptodata/1/paa/US07_NEW_COMB.pep:*
//cgn2 6/ptodata/1/paa/US08_NEW_COMB.pep:*
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(without alignments)
173.908 Million cell updates/sec
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    명
US-09-978-825-24220
US-10-257-498-24220
US-10-219-051B-8227
US-10-219-051B-8227
US-10-425-114-53367
US-10-425-114-53369
US-10-425-114-52369
US-10-425-114-52367
US-10-425-114-52367
US-10-282-122A-49117
US-10-366-683-16956
US-10-419-128-16956
US-10-419-128-16956
US-10-419-128-16956
US-10-425-114-78611
US-10-425-114-68513
US-10-425-114-68513
US-10-425-114-68513
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US-10-264-237-2376
US-10-366-683-32538
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                                     Sequence 70663, A Sequence 32738, A Sequence 32538, A Sequence 24220, A Sequence 8227, Ap Sequence 8227, Ap Sequence 53360, A Sequence 53360, A Sequence 56955, A Sequence 49117, A Sequence 2262, Ap Sequence 15057, A Sequence 15057, A Sequence 61361, A Sequence 64361, A Sequence 643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Description
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| 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 |
|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|----------------------|---------------------|---------------------|---------------------|----------------------|---------------------|---------------------|---------------------|
| 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57.5 | 58 | 58 | 58 | 58 | 58.5 | 58.5 | 59.5 |
| 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.3 | 30.5 | 30.5 | 30.5 | 30.5 | 30.8 | 30.8 | 31.3 |
| 601 | 266 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 66 | 142 | 66 | 66 | 66 | 288 | 152 | 342 |
| σ | σ | O | σ | σ | ហ | σ | U | μ. | μ | μ | σ | 7 | ð | σ | _ | σ | თ | σ |
| US-10-369-493-11844 | US-10-431-652-6190 | US-10-057-498-26771 | US-10-057-498-25676 | US-10-057-498-20271 | US-09-978-825-26771 | US-09-978-825-25676 | US-09-978-825-20271 | PCT-US02-32727-26771 | PCT-US02-32727-25676 | PCT-US02-32727-20271 | US-10-203-138A-10862 | US-60-452-680-16830 | US-10-057-498-12229 | US-09-978-825-12229 | PCT-US02-32727-12229 | US-10-369-493-17910 | US-10-425-114-54667 | US-10-425-114-68594 |
| 11844, | Sequence 6190, Ap | Sequence 26771, A | Sequence 25676, A | Sequence 20271, A | 26771, | Sequence 25676, A | Sequence 20271, A | e 26771, | Sequence 25676, A | Seguence 20271, A | Sequence 10862, A | 16830, | Sequence 12229, A | Sequence 12229, A | Sequence 12229, A | Sequence 17910, A | e 54667, | Sequence 68594, A |

ALIGNMENTS

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APPLICANT: Birse et al.
TITLE OF INVENTION: Nucleic Acids, Proteins, an FILE REFERENCE: PA13191
CURRENT APPLICATION NUMBER: US/10/264,237
CURRENT FILING DATE: 2002-10-04
PRIOR APPLICATION NUMBER: PCT/US01/16450
PRIOR FILING DATE: 2001-05-18
PRIOR APPLICATION NUMBER: US 60/205,515
PRIOR FILING DATE: 2000-05-19
NUMBER OF SEQ ID NOS: 2876
SOFTWARE: Patentin Ver. 3.1
                                                                                                                                                                                                                                                                         RESULT 2
US-10-264-237-2376
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Matches
                                                                                                                                                                                                                               Sequence 2376, Application US/10264237 GENERAL INFORMATION:
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SEQ ID NO 70663
LENGTH: 245
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(53313)B
CURRENT APPLICATION NUMBER: US/10/425,114
CURRENT FILING DATE: 2003-04-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Taba
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Clone ID: UC-ZMFLB73064A07_FLI.pep
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Zea mays FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                      20;
                                                                                                                                                                                                                                                                                                                                                      6 RWLWR-----WRWVRRLRRRWRRRWWWVWRWRRRRRRWVRR
                                                                                                                                                                                                                                                                                                                                                                                          2 RRVWRRVVRVVRRWVRRVRRVWR-----RVVRVVRRWVRR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity 47.6
20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kovalic, David K
Screen; Steven E
Tabaska, Jack E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Zhou,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Yihua
                                                                                                                                                                                                                                                                                                                                                                                                                                                       40.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                      2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 76.5; DB Pred. No. 3.8;
                                                                                                                                                                                            and
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                                                                                                                                                                                            Antibodies
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Sequence 6, Application PC/TUS0204812 GENERAL INFORMATION:

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RESULT 13
US-09-785-058-6
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US-09-785-059-6
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Best Local (
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FRATSEQ for Windows Version 3.0
SEQ ID NO 6
LENGTH: 36
TYPE: PRT
ORCANISM: Artifical sequence
FEATURE:
                                                                                                                                                                                                                                                         Sequence 6, Application US/09785059 GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTHER INFORMATION: Artificial peptide derived from HIV-1
-09-785-058-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396, 0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-PCT / 072396.0223
CURRENT APPLICATION NUMBER: PCT/US02/04812
CURRENT FILING DATE: 2002-02-19
                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                         APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 36
TYPE: PRT
ORGANISM: Artificial Sequence
PEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT ORGANISM: Artifical sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: Artificial peptide derived from HIV-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity 88.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 VRRVWRRVVRVVRRWVRRVRRVWRRVVRVVRRWVRR 36
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Pred. No. 1.9e-08;
0; Mismatches 4
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Pred. No. 1.9e-08;
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Search completed: June Job time: 155.872 secs

2003, 12:25:29

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, OTHER INFORMATION: Artificial peptide derived from HIV-1 US-09-785-059-6
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US-10-079-075-6
                                                                                                                             ; OTHER INFORMATION: Artificial peptide derived from HIV-1 US-10-079-075-6
                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 6
                                                                                                                                                                                                                                                                                                                                                                          Sequence 6, Applicat
GENERAL INFORMATION:
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                                                             Matches
                                                                                           Query Match
                                                                                                                                                                                                                                                                 APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
                                                                                                                                                                                                                                                                                                                                            APPLICANT: Ronald APPLICANT: Timoth
                                                                                                                                                          LENGTH: 36
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
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                           1 VRRVWRRVVRVVRRWVRRVVRRVVRVVRRWVRR 36
                                                                               Similarity
VRRVVRRVVRVVRRVVRVVRRVVRVVRRVVRRVVRR
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                                                              Conservative
                                                                              70.5%;
88.9%;
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                                                                              Score 134; DB 24;
Pred. No. 1.9e-08;
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Pred. No. 1.9e-08;
                                                              Mismatches
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                                                                                             DB 24; Length 36;
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Sequence 12, Application US/09785059
GENERAL INFORMATION:
APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 12
                                                                                                                                                                                                                                                              US-09-785-059-12
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 12
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Best Local :
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Best Local (
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CURRENT APPLICATION NUMBER: PCT/US02/04812
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 12, Application PC/TUS0204812 GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE A 34001 / 072396.0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DETIVED ANTIMICROBIAL PEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: PRT
ORGANISM: Artifical
FEATURE:
ORGANISM: Artifical sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: artificial peptides derived from HIV-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION: artificial peptides derived from HIV-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT
ORGANISM: Artificial Sequence
                                        ENGTH: 48
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                       PRT
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                                                                                                                                                                                                                                                                                                                                                                                                                                Score 176;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
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APPLICANT: Ronald C. Montelaro
APPLICANT: Tinothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID MOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 12
LENGTH: 48
TYPE: PRT
ORGANISM: Artificial Sequence
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                                                                                                                                      PCT-US02-04432-6
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US-10-079-075-12
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                                                                                 Query Match
Best Local Similarity
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Best Local Similarity
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CURRENT FILING DATE: 2002-02-13
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A34001-PCT / D07/100/1/23
                                                                                                                                             FEATURE: OTHER INFORMATION: Artificial peptide derived from HIV-1
                                                                                                                                                                                ORGANISM: Artificial Sequence
                                                                                                                                                                                                         TYPE: PRT
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                                 1 VRRVWRRVVRVVRRWVRRVVRRVVRRVVRRWVRR 36
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VRRVVRRVVRRVVRRVVRRVVRRVVRRVVRR 36
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Pred. No. 1.9e-08;
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RESULT 12 PCT-US02-04812-6

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RESULT 3
US-09-785-058-11
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CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 11
LENGTH: 36
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Best Local Similarity
Matches 36; Conserv
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A34001-PCT / 072396,0223
                                                                       APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A33577 / 072396.0217
CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
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              SOFTWARE: FastSEQ
EQ ID NO 11
LENGTH: 36
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TYPE: PRT
ORGANISM: Artificial Sequence
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TYPE: PRT
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Pred. No. 5.6e-15;
Mismatches 0;
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Pred. No. 5.6e-15;
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TITLE OF INVENTION: VRUS DEIVED ANTIMICROBIAL
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 11
LENGTH: 36
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Best Local Similarity 100.
36; Conservative
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SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 12
LENGTH: 48
TYPE: PRT
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GENERAL INFORMATION:
APPLICANT: Ronald C. Montelaro
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-PCT / 072396.0223
CURRENT APPLICATION NUMBER: PCT/US02/04432
                                                                                                                                                                                                                                                                                                                           APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne
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NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
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Pred. No.
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RESULT 7

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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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/cgn2_6/ptodata/1/paa/US06_COMB.pep:*
/cgn2_6/ptodata/1/paa/US08_COMB.pep:*
/cgn2_6/ptodata/1/paa/US08_COMB.pep:*
/cgn2_6/ptodata/1/paa/US081_COMB.pep:*
/cgn2_6/ptodata/1/paa/US083_COMB.pep:*
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/cgn2_6/ptodata/1/paa/US084_COMB.pep:*
/cgn2_6/ptodata/1/paa/US086_COMB.pep:*
/cgn2_6/ptodata/1/paa/US086_COMB.pep:*
/cgn2_6/ptodata/1/paa/US088_COMB.pep:*
/cgn2_6/ptodata/1/paa/US089_COMB.pep:*
/cgn2_6/ptodata/1/paa/US089_COMB.pep:*
/cgn2_6/ptodata/1/paa/US099_COMB.pep:*
/cgn2_6/ptodata/1/paa/US091_COMB.pep:*
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                                                                                                                                                                 Length
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148.906 Million cell updates/sec
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         DB
  PCT-US02-04432-11
PCT-US02-04812-11
US-09-785-058-11
US-09-785-059-11
US-10-079-075-11
PCT-US02-04432-12
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Sequence 11, Appl
Sequence 12, Appl
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| 73 | | 0 | 80.5 | .0 | 88 | 88 | 88 | 88 | 88 | 96 | 96 | 96 | 96 | 96 | 130 | 130 | 130 | 130 | 130 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 134 | 176 | 176 | 176 | 176 |
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| 82 | 71 | w | 133 | w | 24 | 24 | 24 | 24 | 24 | 31 | 31 | 31 | 31 | 31 | 24 | 24 | 24 | 24 | 24 | 48 | 48 | 48 | 48 | 48 | 42 | 42 | 42 | 42 | 42 | 36 | 36 | 36 | 36 | 36 | 48 | 48 | 48 | |
| 19 | 20 | 27 | 27 | 20 | 24 | 21 | 21 | Н | ۲ | 24 | 21 | 21 | ۳ | ۲ | 24 | 21 | 21 | μ | _ | 24 | 21 | 21 | 1 | ۲ | 24 | 21 | 21 | μ | _ | 24 | 21 | 21 | ш | Н | 24 | 21 | 22 | ь |
| US-09-513-996A-34302 | -09-620-111B-32 | -60-191-681-845 | -19 | 09-614-150-1074 | 079-075- | 09-785-059- | -785-058- | US02-04812- | -US02-04432- | 10-079-07 | 85-059- | 09-785-058- | US02-04812- | US02-04432- | 10-079-075-1 | -785-059-1 | -09-785-058-1 | -US02-04812- | -US02-04432-1 | -10-079-075 | 09-785-059- | 09-785-058- | -US02-04812- | US02-04432- | 10-079-075- | -09-785-059- | -09-785-058- | -US02-04812- | -US02-04432- | 10-079-075- | -09-785-059- | 09-785-058- | -US02-04812- | -US02-04432- | | S-09-785-05 | -09-785-058-1 | 2-1 |
| υ 4. | Sequence 3264, Ap | 84 | 10 | e 10 | e 5, | equence 5, | equence 5, | equence 5, | 5 | e 3, Appl | equence 3, Appl | e 3, Appl | equence 3, | ω | equence 10 | equence 10 | Sequence 10, Appl | equence 10, | 10 | 8 | equence 8 | 8, Appl | | equence 8, Appli | equence 7 | 7, Appl | e 7, Appl | 7, ; | equence 7, Appli | о О | equence 6, Appl | ge 6, | equence 6, | 6, Ap | equence 12, | equence 12, App | equence 12, Ap | Sequence 12, Appl |

ALIGNMENTS

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; Sequence 11, Application PC/TUS0204432
; GENERAL INFORMATION:
; APPLICANT: Ronald C. Montelaro
; APPLICANT: Timothy A. Mietzner
; TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
; FILE REFERENCE: A34001-PC7, 072396.0223
; CURRENT APPLICATION NUMBER: PCT/US02/04432
; CURRENT APPLICATION NUMBER: PCT/US02/04432
; CURRENT PILING DATE: 2002-02-13
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 11
; ENOTH: 36
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                                                                                Query Match
Best Local S
Matches 36
                                                                                                                                                                                          FEATURE: OTHER INFORMATION: Artificial peptide derived from HIV-1
                                                                                                                                                                                                                                     TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                       Similarity
                    VRRVWRRVVRVVRRWVRRVRRVVRRWVRR
                                                                                100.0%; Score 190; DB 1; ilarity 100.0%; Pred. No. 5.6e-15; Conservative 0; Mismatches 0;
                                      36
                                                                                                                           Length
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GENERAL INFORMATION:

Montelaro

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                                                                                                                                                                                                                                                                                        US-10-079-075-8
                                                                                                                                                                                                                                                                                                          RESULT 14
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US-09-785-058-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; OTHER INFORMATION: Artificial peptide derived from HIV-1.
US-09-785-059-8
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Best Local Similarity 88.9
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APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 7
                                                                                                                                                                                                                                                  Sequence 8, Application US/10079075 Publication No. US20020188102A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO 8
LENGTH: 48
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                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                        SEQ ID NO 8
                                                                                            CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
                                                                                                                                              APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VITUS DEPTIDES ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A3357 / 072396.0217
CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                            APPLICANT: Ronald C. APPLICANT: Timothy
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SOFTWARE: FastSEQ for Windows Version 3.0
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CURRENT FILING DATE: 2001-02-16
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Artifical sequence
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ITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
ILE REFERENCE: A 34001 / 072396.0222
                                        ENGTH: 48
GANISM: Artificial Sequence
                      PE: PRT
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32; Conserv
                                                                            FastSEQ for Windows Version 3.0
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88.9%;
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Pred. No. 1.9e-09;
0; Mismatches 4
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Pred. No. 1.6e-09;
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Search completed: June Job time: 19.1489 secs
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US-09-785-058-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; OTHER INFORMATION: Artificial peptide derived from HIV-1 US-09-785-058-8
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NUMBER OF SEQ ID NOS: 12

SOFTWARE: FastSEQ for Windows Version 3.0

SQ ID NO 8

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Best Local Similarity 88.9%;
Matches 32; Conservative
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                               Matches
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
TITLE OF INVENTION A 34001 / 07236.0222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/785,058
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TYPE: PRT
ORGANISM: Artifical sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                               32;
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                                                                                                                                                                                                     13 VRRVVRRVVRVVRRVVRRVVRRVVRRVVRRVVRR 48
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                                                  9, 2003, 12:34:11
                                                                                                                                                                                                                                                                                                                                                                                                                                             70.5%;
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Pred. No. 1.9e-09;
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                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
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RESULT 9
US-09-785-058-6
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; OTHER INFORMATION: Artificial peptide derived from HIV-1
US-10-079-075-6
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US-09-785-059-6
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 6
LENGTH: 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 6, Application US/10079075
Publication No. US20020188102A1
GENERAL INFORMATION:
                                                                                                 NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 6
                                                                                                                                                                                                                                                                                  Sequence 6, Application US/09785058 Publication No. US20030036627A1 GENERAL INFORMATION:
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Best Local
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SOFTWARE: FastSEQ for Windows Version 3
SEQ ID NO 6
LENGTH: 36
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                                                                                                                                                             CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                                   APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILE REFERENCE: A33577 / 072396.0217
CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne
                        TYPE: PRT ORGANISM: Artifical sequence FEATURE:
OTHER INFORMATION: Artificial peptide derived from HIV-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
ORGANISM: Artifical sequence
                                                                                LENGTH: 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
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les 32; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                             VRRVVRRVVRVVRRVVRRVVRRVVRRVVRRVVRR
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Pred. No. 1.4e-09;
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Pred. No. 1.4e-09;
); Mismatches 4
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                                                                                                                                  ; LENGTH: 42
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Artificial peptide derived from HIV-1
US-10-079-075-7
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 7
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 7
LEUGTH: 42
TYPE: PRT
ORGANISM: Artifical sequence
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Matches
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                                                                  Matches
                                                                                                Query Match
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APPLICAMT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT APPLICATION DATE: 2002-02-19
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Best Local &
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A33577 / 072396.0217
CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne:
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                                                                                Local Similarity
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32; Conserv
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l Similarity 88.9%;
32; Conservative
VRRVVRRVVRRVVRRVVRRVVRRVVRRVVRR
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88.9%;
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Pred. No. 1.4e
0; Mismatches
                                                                                Score 134; DB 9;
Pred. No. 1.6e-09;
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Pred. No. 1.6e-09;
0; Mismatches 4
                                                                  Mismatches
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RESULT 12 US-09-785-058-7

Sequence 7, Application US/09785058 Publication No. US20030036627A1

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US-09-785-058-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; OTHER INFORMATION: Artificial peptide derived from HIV-1 US-10-079-075-11
                                                                         US-09-785-059-12
                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 12
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Best Local Similarity
Matches 36; Conserv
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                 Query Match
Best Local Similarity
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 11
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CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REPERENCE: A 34001 / 072396,0222
                                                                                                                                                                                                                                                                         APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
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                                                                                   FEATURE:
OTHER INFORMATION:
                                                                                                                       ORGANISM: Artifical sequence
                                                                                                                                                LENGTH: 48
TYPE: PRT
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ORGANISM: Artifical sequence
FEATURE:
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92.6%; Score 176; DB 9;
100.0%; Pred. No. 2.4e-14;
rive 0; Mismatches 0;
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                                                                                       peptides derived from HIV-1
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Pred. No. 4.2e-16;
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Pred. No. 4.2e-16;
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RESULT 7 US-09-785-059-6

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Sequence 6, Application US/09785059
Patent No. US20020169279A1
GENERAL INFORMATION:
APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES

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US-10-079-075-12
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SEQ ID NO 12
LENGTH: 48
TYPE: PRT
                                                                                                                                                                                                                                                                                                                    Sequence 12, Application US/09785058
Publication No. US2003003627A1
GENERAL INFORMATION:
APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
FILE REFERENCE: A 34001 / 072396.0222
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                                                                 Matches
                                                                                               Query Match
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Best Local Similarity
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
SOFTMARE: FastSEQ for Windows Version 3.0
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                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
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                                                                                                                                                                                    ORGANISM: Artifical sequence
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                                                                                                                                                 OTHER INFORMATION: artificial peptides derived from HIV-1
                                                                                                                                                                    FEATURE:
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                                                                                   Similarity
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No. US20020188102A1
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100.0%;
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                                                                                 Score 176;
Pred. No.
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Pred. No. 2.4e-1
                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                               2.4e-14;
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                                                                                                   DB 9;
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Result
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                             Match
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190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     392085 seqs, 103240269 residues
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   Published Applications AA:*
1: /cgn2_6/ptodata/1/pubpaa/US08
2: /cgn2_6/ptodata/1/pubpaa/UC07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /cgn2_6/ptodata/1/pubpaa/PCT_NEW_FUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US06_NEW_FUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US06_NEW_FUB.pep:*
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/cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
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/cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
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                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9, 2003, 12:01:36 ; Search time 19.1489 Seconds
(without alignments)
194.092 Million cell updat
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ptodata/1/pubpaa/US08 NEW PUB.pep:*
ptodata/1/pubpaa/PCT_NEW_PUB.pep:*
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            US-10-079-075-6
US-09-785-058-6
US-09-785-059-7
US-10-079-075-7
US-09-785-059-8
US-10-079-075-8
US-10-079-075-8
US-10-079-075-10
US-09-785-059-10
US-10-079-075-10
US-09-785-059-10
                                                                                                                                                                                                              US-09-785-059-11

US-10-79-075-11

US-09-785-058-11

US-09-785-059-12

US-09-785-059-12

US-09-785-058-12

US-09-785-058-12

US-09-785-058-1
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            Sequence 11, Appl
Sequence 11, Appl
Sequence 12, Appl
Sequence 12, Appl
Sequence 12, Appl
Sequence 12, Appl
Sequence 6, Appli
Sequence 6, Appli
Sequence 7, Appli
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Sequence 8, Appli
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Sequence 10, Appli
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Sequence
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ALIGNMENTS

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RESULT 2
US-10-079-075-11
US-10-079-075-11
Sequence 11, Application US/10079075
Sequence 11, Application US/10079075
Publication No. US20020188102A1
GENERAL INFORMATION:
APPLICANT: Ronald C. Montelaro
APPLICANT: Timochy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
                                                                                                                                                                                                                                                                                                                     S
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                                                                                                                                                                                                                                                                                                                                                                                                                                            ; OTHER INFORMATION: Artificial peptide derived from HIV-1
US-09-785-059-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-785-059-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 11
LENGTH: 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 11, Application US/09785059 Patent No. US20020169279A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Artifical sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                           36;
                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                           100.0%;
ilarity 100.0%;
Conservative (
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Pred. No. 4.2e-16;
0; Mismatches 0;
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Search completed: June 9, 2003, 11:55:36 Job time: 38.8085 secs
                                                                                                                                                                                                                                       Query Match 32.6%;
Best Local Similarity 29.5%;
Matches 13; Conservative 1
                                                                                                                                                                                                                                                                  The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention i useful in developmental biology and in elucidating call signalling and call-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA sequences (ABL01840-ABL16175) and the encoded proteins (ABB57737-ABB72072).

The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at fit, wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; SEQ ID NO 31632; 21pp + Sequence Listing; English.
                                                                          681 AA;
                                                                                                                                                           11;
                                                                                                                                                       Score 62; DB 22; Length 681; Pred. No. 11; Mismatches 10; Indels
                                                                                                                                                         10;
                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                     18
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SEN virus

protein fragment

SEQ ID

NO: 122.

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RESULT 14
AAB75222
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Best Local :
                                                                                                                                                                                                                                                                                                               Matches
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30-APR-1999;
14-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Primi D,
Bonelli 1
                                                                                                                                                                                                                                                                                                                                                                               The present invention is concerned with the sequence of the genome of the SEN virus (SENV), and the proteins encoded by it. SENV is thought to be the cause of hepatopathies which are not linked to the presence of the hepatitis A, B and E viruses in man. The genome and proteins of this virus can be used in gene therapy and vaccination against the virus, which also causes disorders of the gastrointestinal tract, including Crohn's disease and lupus erythematosus, inflammatory diseases, and proliferative disorders such as cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nucleic acids representing the genome of the SEN virus encoded proteins, useful for treatment of hepatopathies diseases and proliferative disorders such as cancer :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEN virus; SEN proliferative
                                                                                                   Gustatory receptor; fruit fly; crop damage; pest control.
                                                                                                                                                             03-APR-2001
                                                                                                                                                                                                        AAB75222 standard; Protein; 397
                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1; Page 356-358; 392pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2000-376551/32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          16-JUL-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           vaccination; gene
          14-JUN-2000; 2000WO-US16211.
                                                                             Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (DIAS-) DIASORIN SRL.
                                 21-DEC-2000.
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                                                                                                                                                                                                                                                                                                                          Similarity
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                                                                                                                                                                                                                                                                 VRR--RRORRVRRRFYRGRRRGWRR-----RRYIRR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SENV; gastrointestinal ive disorder; hepatopath
                                                                                                                                   gustatory receptor GR59D.2
                                                                                                                                                                                                                                                                                                                                                            743 AA;
                                                                                                                                                                                                                                                                                                              Conservative
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                                                                                                                                                           (first entry)
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99IT-MI00923.
99EP-0830298.
99EP-0113932.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             therapy
                                                                                                                                                                                                                                                                                                                         33.9%;
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hepatopathy; hepatitis; viral infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Olivero
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mantero GL, Mattioli S,
Dlivero P, Dal Corso A,
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                                                                                                                                                                                                                                                                                                                          Score 64.5; DI Pred. No. 6.3;
                                                                                                               taste; pheromone;
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                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                      protein sequence
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                                                                                                                                                                                                                                                                                                                                   21;
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                                                                                                                                                                                                                                                                                                            7;
                                                                                                               semiochemical;
                                                                                                                                                                                                                                                                                                                                   Length
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                                                                                                                                                                                                                                                                                                                                     743;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This invention relates to polynucleotide sequences AAF63732 - AAF63777 which encode Drosophila gustatory receptor proteins represented by sequences AAB75193 - AAB75238. The invention includes methods for determining gustatory receptor ligands. Also included is a method for modulating the expression of the DNA encoding the receptors. The DNA and protein sequences may be used for the identification of compounds, e.g. pheromones and other semicohemicals, which may be used for pest management. The DNA sequences may also be used for behavioural studies involving gustatory systems in various organisms. Also, the DNA sequences may also be used to track down gustatory receptor genes in insects that damage crops or transmit diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New isolated nucleic acid molecule encoding Drosophila Gustatory Receptor protein useful for e.g. identification of compounds whibe used for pest management -
                                                                                                                                23-MAR-2000;
11-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14-JUN-1999; 99US-0138668
10-FEB-2000; 2000US-0181704
                                                           WPI; 2001-656860/75.
                                                                                    Venter
                                                                                                                                                                    23-MAR-2001; 2001WO-US09231
                                                                                                                                                                                              27-SEP-2001.
                                                                                                                                                                                                                    WO200171042-A2
                                                                                                                                                                                                                                             Drosophila melanogaster.
                                                                                                                                                                                                                                                                     pharmaceutical
                                                                                                                                                                                                                                                                                Drosophila; developmental biology; cell signalling; insecticide;
                                                                                                                                                                                                                                                                                                         Drosophila
                                                                                                                                                                                                                                                                                                                                 26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                         ABB68280;
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                                                                                                                                                                                                                                                                                                                                                                                ABB68280 standard; Protein;
                                                                                                           (PEKE )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          l Similarity
13; Conserv
                                                                                  JC, · Adams M,
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                                                                                                                                                                                                                                                                                                       melanogaster polypeptide SEQ ID NO 31632.
                                                                                                           CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          32.6%; ilarity 29.5%; Conservative 1
                                                                                                                                2000US-191637P.
2000US-0614150.
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                                                                                  PWD,
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Pred. No. 6.7;
L1; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
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New isolated nucleic acid genes from Drosophila and interactions -

detection reagent for detecting 1000 or more for elucidating cell signalling and cell-cell

N-PSDB;

ABL12383.

18-JUN-1999; 18-JUN-1999; 18-JUN-1999; 18-JUN-1999; 18-JUN-1999; 18-JUN-1999; 21-JUN-1999;

-JUN-1999;

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RESULT 13
AAB11535 s
ID AAB11535 s
XX
AC AAB11535;
XX
DT 19-DEC-200
XX
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                                                                                                       Query Match
Best Local S
Matches 16
                                                                                                                                     23-AUG-1999

25-AUG-1999

26-AUG-1999

27-AUG-1999

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29-OCT-1999
       19-DEC-2000
                                                                          74
                                                                                                       ch 33.9%;
l Similarity 45.7%;
16; Conservative
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                                      standard;
                                                                                       RRVWRRVVRVVRRWVRRVRRVR---RVVRVVRRW
       (first entry)
                                                                                                                                     9908-0149902
9908-0150566
9908-015066
9908-0151066
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9908-0151307
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                                      Protein;
                                                                           - RRWNWRRRRLWRWRGRRIRGRSRW
                                                                                                      ; Score 64.5; Di
; Pred. No. 0.93
2; Mismatches
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99US-0139460.
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99US-0140695.
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RESULT 11
AAR84926
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  RESULT 12
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Best Local
                                                                                                                                                                            Complex of nucleic acid and oligopeptide with sec. structure transfer vectors contg. them, useful for efficient transfer of nucleic acid to cells in gene therapy.
                                                                                                                                                                                                                                                                                                                                                    Key
Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                     The present peptide corresponds to a generic formula for a cationic oligopeptide; the formula is (b-1-1-b)n, where b is a hydrophobic amino acid, 1 is a hydrophilic amino acid and n is at least 4. In this case, where b is Leu, 1 is Arg and n = 10, the oligopeptide forms an alphahelix which forms a stable complex with a nucleic acid. The complex is suitable for transferring nucleic acid, esp. in gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                              08-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                             Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                            Alpha-helix; secondary structure; nucleic acid transfer; cationic; DNA binding peptide; gene therapy; encapsulation.
                                                                                                                                                                                                                                                                                                                                                                                                                   Alpha-helix-forming oligopeptide (LRRL)10
                                                                                                                                                                                                                                                                                                                                                                                                                                    18-MAR-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAR84926;
                                                                                                                                                             Claim 6; Page 16; 20pp; French.
                                                                                                                                                                                                                                                                             08-FEB-1994;
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                                    1 VRRVWRRVV-RVVRRWVRR-VRRWWRRVV-RVVRRWVRR 36
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ilarity 46.2%;
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    pref. 10-50"
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Pred. No. 0.36
L4; Mismatches
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18-JUN-1999;
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118-MAY-1999
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25-MAY-1999
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9905-0132407 9905-0132485 9905-0132486 9905-0132486 9905-01322863 9905-0134768 9905-0134721 9905-0134721 9905-0134721 9905-013476 9905-013476 9905-013552 9905-013552 9905-013552 9905-013552 9905-013622 9905-013622 9905-013622 9905-013622 9905-013622 9905-013622 9905-013622 9905-013622 9905-013622 9905-013622 9905-013622 9905-013622 9905-013622 9905-013622 9905-013622 9905-013622 9905-013624 9905-0139452 9905-0139453 9905-0139455 9905-0139455 9905-0139456

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Protein identification; signal transduction pathway; metabolic pathway; hybridisation assay; genetic mapping; gene expression control; promoter termination sequence.
                                                                                                                                                                                                                                                                                                                                               AAG54778;
                                                                                                                                                                                                                                                                                                                                                                                             AAG54778 standard; Protein; 105
06-SEP-2000
                                                EP1033405-A2
                                                                                           Arabidopsis thaliana
                                                                                                                                                                                                                                         Arabidopsis thaliana protein fragment SEQ ID NO:
                                                                                                                                                                                                                                                                                               18-OCT-2000
                                                                                                                                                                                                                                                                                               (first entry)
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promoter;

2000EP-0301439

99US-0123180 99US-0123548 99US-0121825

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RESULT 9
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Best Local (
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The present sequence represents a protein of Sentinel virus I (SVI). SVI polymucleotides are useful for detecting SVI virus. Probes and primers derived from SVI polymucleotide sequences are useful for identifying and isolating new variants of SVI. SVI polymucleotides are useful for detecting SVI virus, producing SVI polymphides, constructing SVI-based expression/transduction vectors and as antisense oligonucleotides or for construction of antisense SVI vectors. Antisense SVI polymucleotides block expression of SVI proteins and/or SVI viral replication in SVI infected cells, and thus are useful for treating SVI infected cells, and thus are useful for treating SVI infected cells.
                                                                                                                                                                                                                                                                                                                 Novel virus, designated sentinel virus I, associated with cryptogenic, nonh-G hepatitis, and polynucleotides and polypeptides of virus useful for detecting SVI virus and/or SVI virus infection -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sentinel virus
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                                                                                                                                                                                                                                                                       Example 1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Liu J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               08-DEC-2000; 2000WO-IB02011
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SVI; viral replication; viral infection; vaccine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Amino acid sequence of a Sentinel virus I (SVI) protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22-AUG-2001
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2.8;
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          nervous system, however it is particularly involved in the inflammatory lesions associated with acne vulgaris. A method for detecting the presence or absence of P. acnes in a patient comprises contacting a sample with a binding agent that binds to the proteins of the invention and determining the amount of bound protein in the sample. The polypeptides may be used as antigens in the production of antibodies specific for P. acnes proteins. These antibodies can be used to downregulate expression and activity of P. acnes polypeptides and therefore treat P. acnes infections. The antibodies may also be used as diagnostic agents for determining P. acnes presence, for example, by enzyme linked immunosorbent assay (BISA).

Note: The sequence data for this patent did not form part of the printed
                                                                                                                                                                                                                        Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic polypeptides. The proteins and their associated DNA sequences are used in the treatment, prevention and diagnosis of medical conditions caused by P. acnes. The disorders include SAPHO syndrome (synovitis, acne,
                                                                                                                                                                                                                                                                                                                              Propionibacterium acnes vaccinating against and treating acne vulgaris
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-APR-2000; 2000US-199047P.
02-JUN-2000; 2000US-208841P.
07-JUL-2000; 2000US-216747P.
                                                                                                                                                                                           pustulosis, hypertosis and osteomyelitis), uveitis and endophthalmitis. P. acnes is also involved in infections of bone, joints and the central
                                                                                                                                                                                                                                                                                                  Example 1;
                                                                                                                                                                                                                                                                                                                                                                                            N-PSDB; AAS59630.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      Skeiky YAW,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Propionibacterium
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay;
                                                                                                                                                                                                                                                                                                                                                                                                           2001-616774/71.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis;
is; endophthalmitis; bone; joint; central nervous system; ELISA;
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                                                                                                                                                                                                                                                                                                  SEQ ID No 24220; 1069pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           osteopathic; neuroprotectant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               acnes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  acnes immunogenic
                                                                                                                                                                                                                                                                                                                                                                                                                                     Zhang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     DH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35.3%;
                                                                                                                                                                                                                                                                                                                                            polypeptides and nucleic acids useful for diagnosing infections, especially useful
                                                                                                                                                                                                                                                                                                                                                                                                                                     Ķ
                                                                                                                                                                                                                                                                                                                                                                                                                           Mitcham JL, warry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SVI infection
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Pred.
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RESULT 7
AAB84458
ID AAB8
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AC AAB8
XC AAB8
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DT 22-A
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DE Amir
XX
KW SVİ;
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AAB03840
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                                                                                                                                                                           Matches
                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                         A method for serum type classification of TT virus (also known as hepatitis TT virus) has been identified. The method relies on the use of peptide fragments of the virus. The invention also relates to the use of TT virus peptides for anti-TT virus antibody determination. The anti-TT virus antibodies and the serum type classification method, can be used to screen TT virus, to determine its route of infection, and seroconversion. The classification of TT virus may lead to improved treatment of viral disease. The present sequence represents a fragment of TT virus protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Serum type classification; identify; treatment.
                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                   Peptides for determination of anti-TT virus antibody and method serum classification of TT virus using the peptides
                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2000-415430/36.
                                                                                                                                                                                                                                                                                                                                                                                                                      29-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                         29-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            16-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JP2000135087-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TT virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Protein fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20-OCT-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAB03840 standard; protein; 120
                                                                                                                                                                                                                                                                                                                                  Claim 1;
         SVf; viral replication; viral infection; vaccine
                                                22-AUG-2001
                            Amino acid sequence of a Sentinel virus I (SVI) protein.
                                                                                      AAB84458 standard; Protein; 634 AA.
                                                                                                                                                                                                                                                                                                                                                                                                     (SRLS-) SRL
                                                                                                                                                                                    Local
                                                                                                                                                                                                                                  in the course of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          488 LWRNRLLRLILWLRRNRLLWLLILRLRRNWLLR 521
                                                                                                                                    11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 VWR-RVVRVVRRWVRRVVRRVVRRVVRRWVRR 36
                                                                                                                                                       N
                                                                                                                                                                          l Similarity
23; Conserv
                                                                                                                                                   RRVWRRVVRVXRWVRR------VRRVWRRVVRVVR------RWVRR 36
                                                                                                                                                                                                                                                                                                                                Page 7; 12pp; Japanese.
                                                                                                                                     RRPWRR - - RRWRRWRRRRRPRRRRPVRRYORR - - RTVRRRRRGRWIRR
                                                                                                                                                                                                                120 AA;
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                                                                                                                                                                           Conservative
                                               (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 #2 used in TT virus
                                                                                                                                                                                 37.6%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TT virus;
                                                                                                                                                                           1;
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1; Mismatches
                                                                                                                                                                         Score 71.5; DB 21; Pred. No. 0.16; 1; Mismatches 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               antibody; viral infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 antibody determination.
                                                                                                                                                                        7;
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                                                                                                                                                                           Indels
                                                                                                                                                                                            Length 120;
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                                                                                                                                    5<u>4</u>
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AAB84456
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Best Local S
Matches 22
                                                                                                                                                                                                                                                                                                                                                                       Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sentinel virus I.
                                                                                                                                              Sentinel virus I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Liu J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (HOFF )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14-JUN-2001.
          WPI; 2001-381643/40
                             Liu J,
                                                                  10-DEC-1999;
                                                                                                         14-JUN-2001.
                                                                                                                            WO200142299-A2
                                                                                                                                                                                                       22-AUG-2001
                                                                                                                                                                                                                          AAB84456;
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                                                                                                                                                                                                                                                                                                                                  l Similarity
22; Conserv
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                            Bohenzky RA,
                                                                                                                                                                                                                                                                                                                                                                        634 AA;
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The present sequence represents a protein of Sentinel virus I (SVI). SVI polynucleotides are useful for detecting SVI virus. Probes and primers derived from SVI polynucleotide sequences are useful for identifying and isolating new variants of SVI. SVI polynucleotides are useful for detecting SVI virus, producing SVI polypeptides, construct SVI-based expression/transduction vectors and as antisense oligonucleotides or for construction of antisense SVI vectors. Antise SVI polynucleotides block expression of SVI proteins and/or SVI viral replication in SVI infected cells, and thus are useful for treating SVI infections. SVI polypeptides are useful in vaccines for preventing SVI infection and for treating SVI infection and for treating SVI infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Novel virus, designated sentinel virus I, associated with cryptogenic, nonA-G hepatitis, and polynucleotides and polypeptides of virus useful for detecting SVI virus and/or SVI virus infection -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Example 1; Page 62-64; 65pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08-DEC-2000; 2000WO-IB02011
                                                                                                                                                                                08-DEC-2000; 2000WO-IB02011
                                                                                                                                                                                                                                                                                                                                                                                                                      SVI; viral replication; viral infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Amino acid sequence of a Sentinel virus I (SVI) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB84456 standard; Protein; 635 AA.
                                                        (HOFF ) ROCHE DIAGNOSTICS GMBH.
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ilarity 61.1%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
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Υ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 67; DB Pred. No. 2.8; 1; Mismatches
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Best Local Similarity
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28-OCT-1999;
29-OCT-1999;
                                                                           The nucleic acids, proteins, antibodies and (anti-agonists are useful in the diagnosis, treatment and prevention of: (a) cancer, e.g. breast and ovarian cancer and other cancers of the adrenal gland, bone, bone marrow, breast, gastrointestinal tract, liver, lung, or urogenital; (b) immune disorders e.g. Addison's disease, allergies, autoimmune haemolytic anaemia, autoimmune thyroiditis, diabetes mellitus, Crohn's disease, multiple sclerosis, rheumatoid arthritis and ulcerative colitis; (c) cardiovascular disorders such as myocardial ischaemias; (d) wound healing; (e) neurological diseases, e.g. cerebral anoxia and epilepsy; and (f) infectious diseases such as viral, bacterial, fungal and parasitic infections.
                              printed specification, from WIPO at ftp.wipo.i
                                                                                                                                                                                                                                                                     The invention relates to novel genes (ABL89449-ABL90853) and proteins (ABB89040-ABB90444) useful for preventing, treating or ameliorating medical conditions e.g. by protein or gene therapy. The genes are isolated from a range of human tissues disclosed in the specification.
                                                                                                                                                                                                                                                                                                                                                                                                       Novel 1405 isolated polypeptides, useful for diagnosis, treatment and prevention of neural, immune system, muscular, reproductive, gastrointestinal, pulmonary, cardiovascular, renal and proliferative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cytostatic; immunosuppressive; nootropic; neuroprotective; antiviral; antiallergic; hepatotropic; antidiabetic; antiinflammatory; antiulcer; vulnerary; anticonvulsant; antibacterial; antifungal; antiparasitic;
                                                                                                                                                                                                                                                                                                                                                             Claim 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19-MAY-2000; 2000US-205515P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18-MAY-2001; 2001WO-US16450.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cardiant; gene therapy; cancer; immune disorder; cardiovascular disorder; neurological disease; infection; human; secreted protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human polypeptide SEQ ID NO 2376.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24-MAY-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2002-122018/16.
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                                                               The sequence data
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                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 2376;
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99US-0161993.
99US-0162142.
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                          ta for this patent did not form part of the , but was obtained in electronic format dire.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                          2081pp + Sequence Listing; English.
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Pred. No. 0.086;
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                                                 format directly
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RESULT
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                                                                   polymerase chain reaction (PCR) primers, oligomers, and for chromosome and gene mapping, and in recombinant production of (II) The polymucleotides are also used in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating disorders involving aberrant protein expression or biological activity. The polypeptide and polynucleotide sequences have applications in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits to assess biodiversity and to produce other types of data and products dependent on DNA and amino acid sequences. ABG00010-ABG30377 represent novel human
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                                                                                                                                                                                                                                                                                                                                                                                                         New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutation responsible for genetic disorders or other traits and to assess
Sequence
                                                                                                                                                                                                                                                                                                                   The invention relates to isolated polynucleotide (I) and polypeptide (II) sequences, (I) is useful as hybridisation probes.
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23-AUG-2000; 2000US-0649167.
                                                                                                                                                                                                                                                                                                                                                                  Claim 20; SEQ ID No
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Similarity 52.8%;
19; Conservative
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99US-0121825

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99US-0125788.

99US-0126264.

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 Q8V7G0;
01-MAR-2002
01-MAR-2002
                                                                                                                                                                                     "Analysis of the complete genomes of thirteen 7 classifiable into the fourth and fifth genetic viremic infants.";
Arch. Virol. 147:21-41(2002).
EMBL, AB064629; BAB79402.1; -.
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Interpro; IPR004219; TTvirus Unk.
Pfam; PF029546; TT ORF1; 1.
SEQUENCE 746 AA; 89191 MW; FB
                               Q8V7G0
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MEDLINE=21844401; PubMed=11855633;
Peng Y.H., Nishizawa T., Takahashi M., Ishikawa T.,
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NCBI_TaxID=68887;
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                                                                                                                                                                     SEQUENCE
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01-MAR-2002 (TrEMBLrel.
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Arch. Virol. 147:21-41(2002).
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Peng Y.H., Nishizawa
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STRAIN=JT03F;
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                                                                                                                                                                    49 AA;
  (TrEMBLrel.
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                               PRELIMINARY;
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awa T., Takahashi M., Ishikawa T., Yoshikawa
                                                                                                                                                                   7034 MW; ClEA6EBF6AlDCFCD CRC64;
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Pred. No. 0.29;
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sequence update)
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Search completed: June Job time: 34.0638 secs

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                                                             Query Match
Best Local Similarity
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Arch. Virol. 147:21-41(2002).
Arch.; AB064605; AB079350.1; -.
InterPro; IPR004219; TTvirus Unk.
Pfam; PF02956; TT_ORF1; 1.
                                                                                                                                                                                                                                                                             STRAIN=CT44F;
Okamoto H.;
Submitted (JUL-2001)
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TT virus.
Viruses; ssDNA viruses; unclassified ssDNA viruses
                                                                                                                                                                          "Analysis of the complete genomes of thirteen TT virus variants classifiable into the fourth and fifth genetic groups, isolated
                                                                                                                                                                                                               MEDLINE=21844401; PubMed=11855633; Peng Y.H., Nishizawa T., Takahashi M.,
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STRAIN=CT44F;
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                                                                                                  SEQUENCE
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                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
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15 RRRWTR-GRLRRRWPRRSRRPRRRRRWRR
                   2 RRVWRRVVRVVRWVRRVV-RRVWRRVVRVVRVVR
                                                20;
                                                                                                 56; TT_ORF1; 1.
744 AA; 87602 MW;
                                                Conservative
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Pred. No.
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                                                                       DB 12; Length 744;
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48
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RESULT 10
Q8V7D9
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01-MAR-2002
01-JUN-2002
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MEDLINE=21488921; PubMed=11601907;
MISHIZAWA T., Takahashi
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TT virus.
Viruses; sgDNA viruses;
NCBI_TaxID=68887;
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Viruses; ssDNA viruses; unclassified ssDNA viruses.
SEQUENCE
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MEDLINE=21844401; PubMed=11855633;
Peng Y.H., Nishizawa T., Takahashi
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InterPro; IPR004219; TTvirus_Unk.
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Yoshikawa A.;
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                                                       TTV-like mini virus.
Vizuses; ssDNA virus
NCBI_TaxID=93678;
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01-OCT-2000
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InterPro; IPR004219; TTvirus_Unk.
Pfam; PP02956; TT_ORF1; 1.
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52.6%;
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Q8V7H8
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                    Q8V7H8;
Q8V7H8;
01-MAR-2002
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Query Match
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Matches 17
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Q9JG47;
01-OCT-2000
01-OCT-2000
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Takahashi K., Hijikata M., Samokhvalo
"Full or near full length nucleotide
(types SAMBAN and YONBAN) and the TT
Intervirology 43:119-123(2000).
EMBL; AB038631; BAA93612.1; -
                                                                                                                                                                                                                                                                                                                                                         STRAIN=TLMV-NLC030;
Mishiro S., Hijikata
Submitted (FEB-2000)
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NCBI_TaxID=93678;
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EMBL; AB038625; BAA93595.1; -.
InterPro; IPR001064; Crystallin.
InterPro; IPR001064; Crystallin.
InterPro; IPR001064; Crystallin.
InterPro; IPR001064; Crystallin.
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PROSITE; PS00225; CRYSTALLIN BETAGAMMA; UNKNOWN
SEQUENCE 683 AA; 80452 MW; · 10810FC3008A97C6
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MEDLINE=20428649; P
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Mishiro S., Hijikat
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                                                                                                                          InterPro; IPR001064; Crystallin.
InterPro; IPR004219; TTvirus_Unk.
Pfam; PF02956; TT_ORF1; 1.
PROSITE; PS00225; CRYSTALLIN_BETAGAMMA; UNKNOWN_1.
SEQUENCE 683 AA; 80357 MW; 89C200718955CCB4_CRC64;
                                                                                                                                                                                                                                                                                                         STRAIN=TLMV-NLC030;
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                                                             l Similarity
17; Conserv
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WRR-----WRWRRRPRRLWRRRFRRPLYRRFWRR
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the EMBL/GenBank/DDBJ databases.
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:he EMBL/GenBank/DDBJ
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Pred. No. 3.1;
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PRELIMINARY; (TrEMBLrel. (TrEMBLrel.

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RESULT 7
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 Q9IFV0
Q9IFV0;
01-OCT-2000
01-OCT-2000
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01-MAR-2001
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TT virus.
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"Species-specific TT viruses in humans
phylogenetic relatedness.";
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Submitted (APR-2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Okamoto H., Nishizawa T., Tawara A., Peng Y., Ta
Kishimoto J., Tanaka T., Miyakawa Y., Mayumi M.;
"Species-specific TT viruses in humans and nonhu
                                                                                                                                                             SEQUENCE
                                                                                                                                                                       Pfam;
                                                                                                                                                                                                                                       MEDLINE=20534983; PubMed=11080484; Okamoto H., Nishizawa T., Tawara A
                                                                                                                                                                                                                                                               STRAIN=AT-TTV3;
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InterPro; IPR004219; TTvirus_Unk.
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Virology 277:368-378(2000)
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MEDLINE=20534983; PubMed=11080484;
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nterPro; IPR004219; TTvirus_Unk.
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INCE 720
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NCE 735 AA; 8613
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 (TrEMBLrel. (TrEMBLrel.
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AA; 8594
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Miyakawa Y., Mayumi M.;
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Pred. No. 1.3;
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Pred. No. 0.98;
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       Q91D04;
Q91D04;
01-DEC-2001
01-DEC-2001
01-JUN-2002
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Q9DT81;
01-MAR-2001
01-MAR-2001
01-JUN-2002
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TT virus.
ORF1.
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                                                                                                                                                                        InterPro; IPR004219; TTvirus_Unk. Pfam; PF02956; TT ORF1: 1
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"TT virus mRNAs detected in the
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NCBI_TaxID=68887;
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Hallett R.L., Clewley J.P., Bobet F., Mc
"Characterization of a highly divergent
J. Gen. Virol. 81:2273-2279(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JUN-2002 (TrEMBLrel. Putative capsid protein. TT virus. Viruses; ssDNA viruses;
                                                                                                                                                                                                                                           Okamoto H., Nishizawa
                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
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Hallett R.L.,
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                                                                                                                                                                                                        Biochem.
                                                                                                                                                                                                                                                     MEDLINE=20568739; PubMed=11118348;
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        (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
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88552 MW;
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       sequence update) annotation updat
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RA Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,
RA Shue B.C., Siden-Kiamos I., Simpson M., Skupski M.P., Smith T.,
RA Syler E., Spradling A.C., Stapleton M., Strong R., Sun E.,
Sylrskas R., Tector C., Turner R., Venter B., Wang A.H., Wang X.,
RA Wang Z.-Y., Wassarman D.A., Weinstock G.M., Weissenbach J.,
RA Williams S.M., Woodage T., Weinstock G.M., Veissenbach J.,
RA Ye J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Q.A.,
RA Zheng X.H., Zhong F.N., Zhong W., Zhou X., Zhu S., Zhu X., Smith H.O.,
RA Gibbs R.A., Myers E.W., Rubin G.M., Venter J.C.;
"The genome sequence of Drosophila melanogaster.";
EMBL; AE003504; ARF48711.1;
DR Flybase; FBgn0030830; CG5172.
SQ SEQUENCE 133 AA; 14510 MW; 161861BFE8ACB6C6 CRC64;
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Viruses;
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Liu X., Mattei B.,
                                                                                                                                                                                                                                                                                                                                                                                                                 "Heterogeneous distribution of TT virus multiple tissues from infected humans.", Virology 288:358-368(2001).
                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                EMBL; AB060595; BAB69912.1; -.
InterPro; IPR004219; TTvirus_Unk.
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Okamoto H., Nishizawa T., Takahash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 viruses; ssDNA viruses; unclassified
NCBI_TaxID=68887;
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01-DEC-2001
                                     TT virus.
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                    SSDNA
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llarity 60.0%;
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                    viruses;
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                      unclassified ssDNA viruses.
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1; Mismatches
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Pred. No. 0.01
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Best Local (
 ORF1.
TT virus.
Viruses; ssDNA viruses; v
NCBI_TaxID=68887;
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Q9DUC9;
01-MAR-2001
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01-MAR-2002
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SEQUENCE FROM N.A.
MEDLINE=21844401; PubMed=11855633;
MEDLINE=21844401; Takahashi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    phylogenetic relatedness.";
Virology 277:368-378 (2000).
EMBL; AB041960; BAB19316.1; -.
InterPro; IPR004219; TTvirus_Unk.
Pfam; PF02956; TT_ORF1; 1.
SEQUENCE 712 AA; 84927 NW; 0E0324B6121CD66A
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01-MAR-2002
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Okamoto H., Nishizawa T., Tawara A., Peng Y., Takahashi M.,
Kishimoto J., Tanaka T., Miyakawa Y., Mayumi M.;
"Species-specific TT viruses in humans and nonhuman primates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A. STRAIN=SO-TTV2;
                                                                                                                                                                                                                                                                                                                                                                                  viremic infants.";
Arch. Virol. 147:21-41(2002).
EMBL; AB064627; BAB79398.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Analysis of the complete classifiable into the four
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TT virus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       unclassified
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                                     unclassified
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Pred. No. 0.63,
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Yoshikawa A.,

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Total number of hits satisfying chosen parameters:
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Copyright (c) 1993 - 2003 Compugen Ltd
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          Q91cz2
Q9ducz2
Q9duc9
Q9duc9
Q9dub7
Q9dt81
Q9dt81
Q91d04
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Q91g47
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RA Adamstides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
RA Manaratides P.G., Scherer S.E., Richards S., Ashburner M., Henderson S.N.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
RA Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
RA Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
RA Brandon R.C., Baxter E.G., Helt G., Nelson C.R., Miklos G.I.G.,
RA Man K.H., Doyle C., Baxter S.G., Helt G., Nelson C.R., Miklos G.I.G.,
RA Ballew R.M., Bayayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,
RA Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P.,
RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P.,
RA Gorry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Dew I., Dietz S.M.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Doleck A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Hostin D., Houston K.A., Howland T.J., Wei M.-H., Ibegwam C.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
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Q9VX67;
01-MAY-2000 (TrE
01-MAY-2000 (TrE
01-MAY-2000 (TrE
CG5172 protein
CG5172.
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Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
NCBI TaxID=7227;
                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
STRAIN-BERKELEY;
MEDLING-20196006; PubMed-10731132;
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Q62743
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Q9Y469
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Q9PH6
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08V7E7
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Q9es15 mus musculu
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Q9qu36 ttv-like mi
Q8v7c3 tt virus. o
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sp_archea:*
sp_bacteria:*

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sp_plant:*
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Best Local :
                                                          Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-NOV-1997 (Rel. 35, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 40, Last amotation update)
Putative glycosyl transferase Rv2957 (EC 2.-.-).
RV2957 OR MT3031 OR MTCY349.31C OR U0002KC.
                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Ew the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content modified and this statement is not removed. Usage by and entities requires a license agreement (See http://www.isb-sorsend an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                 laboratory strains.";
Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases.
-!- SIMILARITY: BELONGS TO THE GLYCOSYLTRANSFERASE FAMILY 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=CDC 1551 / Oshkosh;
Fleischmann R.D., Alland D., Eisen J.A., Carpenter L., White O.,
Peterson J., DeBoy R., Dodson R., Gwinn M.L., Haft D., Hickey E.,
Kolonay J.F., Nelson W.C., Umayam L.A., Ermolaeva M.D., Salzberg S.L
Delcher A., Utterback T., Weidman J., Khouri H., Gill J., Mikula A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN=H37Rv;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (SEP-1994)
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Actinomycetales; Corynebacterineae; Mycobacteriaceae; Mycobacterium
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EMBL; 283018; CAB65419.1; ALT_INIT.
EMBL; AE007125; AAK47357.1; -.
TIGR; MT3031; -.
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                                                                                                                                          Hypothetical protein;
Complete proteome.
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                                                                                                                                                  nterPro; IPR001173; Glycos_transf_2.
fam; PF00535; Glycos_transf_2; 1.
ypothetical protein; Transferase; Glycosyltransferase;
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R., Robison
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                                                                                                                       256 AA;
                                                          Conservative
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                                                    Pred. No. 3.5;
5; Mismatches
                                                                         Score 53;
Pred. No.
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                                                                                       Length 256;
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Q96831;
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01-NOV-1997
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or send a
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YQO6 CA:
Q09296;
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Submitted (JUL-1995)
                                                                                                   This SWISS-PROT entry is copyright. It is produced through a cobetween the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and fo entities requires a license agreement (See http://www.isb-sib.
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Hypothetical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
STRAIN=Bristol N2;
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Rhabditidae; Pelode
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                                                                                 entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                         Tarassishin L., Szawlowski P.W.S., McLay J., Russell W.C
Submitted (OCT-1996) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                            Viruses; dsDNA viruses,
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                                        EMBL; U70921; AAC83411.1;
                                                                                                                                                                                                                                                                                                      STRAIN=RI-6;
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                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=28280;
                                                                                                                                                                                                                                                                                                                                                                                                                Human adenovirus type
                    InterPro;
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(Rel. 40, Last a
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Adeno
VII;
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                                                                                                                                                                                                                                                                               Russell W.C.;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 477;
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Matches 14
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Best Local
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                                                                                                       Pfam; PF00308; RrnaAD; 1.
Pfam; PF00308; RrnaAD; 1.
PROSITE; PS01131; RRNA A DIMETH; 1.
Antibiotic resistance; Transferase;
Antibiotic 319 AA; 35527 MW; 3A54:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDITINE=88169508; PubMed=3127381;
MEDITINE=88169508; PubMed=3127381;
Kamimiya S., Weisblum B.;
"Translational attenuation control of ermSF, an inducible resistance
"Translational attenuation numethyltransferase from Streptomyces
                                                                                                                                                                 EMBL; M19269; AAA26742.1;
InterPro; IPR001737; RRNA
InterPro; IPR000051; SAM_I
                                                                                                                                                                                                                   use by non-profit institutions as long as its content modified and this statement is not removed. Usage by are entitles requires a license agreement (See http://www.isborsend an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-NOV-1995 (Rel. 32, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
rRNA adenine N-6-methyltransferase (EC 2.1.1.48)
lincosamide-streptogramin B resistance protein)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ERMS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=1906;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bacteria; Actinobacteria;
Actinomycetales; Streptom;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Streptomyces fradiae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 resistance protein).
ERMSF OR TLRA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bacteriol. 170:1800-1811(1988).
                                                                                                                                                                                                                                                                          s SWISS-PROT entry is copyright. It is produ
ween the Swiss Institute of Bioinformatics
European Bioinformatics Institute. There a
                                                                                                                                                                                                                                                                                                                                           AFFINITY BETWEEN RIBOSOMES & MACROLIDE-LINCOSAMIDE-STREPTOGRAM ANTIBIOTICS.

CATTALYTIC ACTIVITY: S-adenosyl-L-methionine + rRNA = S-adenosyl-D-methyladenine.

SIMILARITY: BELONGS TO THE RRNA ADENINE N-6-METHYLTRANSFERASE
                                                                                                                                                                                                                                                                                                                                     FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                     FUNCTION: THIS PROTEIN PRODUCES A DIMETHYLATION RESIDUE AT POSITION 2058 IN 23S RRNA, RESULTING
 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRFR
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17; Conserv
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                                                                     Similarity
                         RRVWRRVVRVVRRWVRRVVRRVVRRVVRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RHSWDNVVRILNRRGHDWTVERLRRAVHRLVREKLAEPELLARSLRR 242
RHEWRLLGRVSRREFRPVPRVDSGILRIERR 238
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bacteria; Actinobacteria (class); Actinobacteridae; Streptomycineae; Streptomycetaceae; Streptomyces.
                                                                                                                                                              ; RRNA A dimeth.
; SAM bind
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                                                                  28.9%;
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                                                      4;
                                                                   Score 55; 1
Pred. No. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 55; I
Pred. No. 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAND CLEAVAGE AND REJOINING (BY SIMILARITY).
48C03BD3A4A9420F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                            rase; Methyltransferase.
3A543FA222CFB7DB CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                        & MACROLIDE-LINCOSAMIDE-STREPTOGRAMIN B
                                                      Mismatches
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                                                                                                                                                                                                                                                                                             It is produced through a collaboration - informatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            319
                                                                                                                                                                                                                                   (See http://www.isb-sib.ch/announce/
                                                                   DB 1;
2.5;
                                                                                                                                                                                                                                                                          There are no
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2.3;
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                                                      13;
                                                                                Length 319;
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RESULT 12 WECA_YERPE

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1 VRRVWRRVVRVVRRWVRRVRR

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Q8ZAE1;
15-JUN-2002
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                                                                                                                                                                                                                                                                                                               Lipopolysaccharide biosynthesis; Transferase; Transmembrane; Inner membrane.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -i- FUNCTION: Catalyzes the synthesis of Und-PP-GlcNAc (Lipid I), the first lipid-linked intermediate involved in ECA synthesis. This lipid is also an acceptor for the addition of subsequent sugars to complete the biosynthesis of O-antigen (By similarity).
-i- CATALYTIC ACTIVITY: UDP-N-acetyl-D-glucosamine + undecaprenyl monophosphate = UMP + undecaprenyl N-acetyl-alpha-D-glucosaminyl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN=CO-92 / Biovar Orientalis;

MEDLINE=21470413; PubMed=11586360;

Parkhill J., Wren B.W., Thomson N.R., Titball R.W., Holden M.T.G.

Prentice M.B., Sebaihia M., James K.D., Churcher C., Mungall K.L.

Baker S., Basham D., Bentley S.D., Brooks K., Cerdeno-Tarraga A.P.

Chillingworth T., Cronin A., Davies R.M., Davis P., Dougan G.,

Peltwell T., Hamlin N., Holroyd S., Jaxis P., Dougan G.,

Peltwell T., Hamlin N., Holroyd S., Jaxis Karlyshev A.V.,

Leather S., Moule S., Oyston P.C.F., Quail M., Rutherford K.,

Simmonds M., Skelton J., Stevens K., Whitehead S., Barrell B.G.;

"Genome sequence of Yersinia pestis, the causative agent of plaguation of the sequence 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               +
                                                                                 SEQUENCE
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15-JUN-2002 (Rel. 41, Last annotation update)
15-JUN-2002 (Rel. 41, Last annotation update)
Undecaprenyl-phosphate alpha-N-acetylglucosaminyltransferase (EC 2.4.1.-) (UDP-GlcNAc:undecaprenyl-phosphate GlcNAc-1-phosphate
                                                                                                                                                                                                                                                                                                       TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                    InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 entities requires a license agreement
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              pyrophosphate.

COPACTOR: Magnesium and manganese (By similarity)

PATHWAY: Synthesis of enterobacterial common anti

Synthesis of lipopolysaccharide O-antigen.

SUBCELLULAR LOCATION: Integral membrane protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (By similarity) SIMILARITY: BEI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                           Pro; IPR000715; Glycos_transf_4.
PF00953; Glycos_transf_4; 1.
10;
                                                                                                                                                                                                                                                                                                                                                                                                                                              an email to license@isb-sib.ch).
                    Similarity
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315
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65
89
119
152
177
207
233
233
                                                                            40766 MW;
                    28.2%;
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  Mismatches
                    53.5;
No. 4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 There are no restrictions ong as its content is in oved. Usage by and for con
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4
                                                                               CRC64;
                                     Length
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  Indels
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Mungall K.L.,
                                         365;
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RESULT 9
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Matches 8
                  P SEQUENCE FROM N.A.

C STRAIN=ATCC 35092 / DSM 1617 / P2;

C STRAIN=ATCC 35092 / DSM 1617 / P2;

X MEDLINE=21332296; PubMed=11427726;

X MEDLINE=21332296; PubMed=11427726;

X MEDLINE=21332296; PubMed=11427726;

A She Q., Singh R.K., Confalonieri F., Zivanovic Y., Allard G.,

A Newayez M.J., Chan-Weiher C.C.-Y., Clausen I.G., Curtis B.A.,

A De Moors A., Erauso G., Fletcher C., Gordon P.M.K.,

A De Moors A., Erauso G., Fletcher C., Kozera C.J., Medina N., Peng

A Heikamp-de Jong I., Jeffries A.C., Kozera C.J., Medina N., Peng

A Thi-Ngoc H.P., Redder P., Schenk M.E., Theriault C., Tolstrup N

A Charlebois R.L., Doolittle W.F., Duguet M., Gaasterland T.,

A Charlebois R.L., Doolittle W.F., Duguet M., Gaasterland T.,

A Charlebois R.L., Doolittle W.F., Van der Oost J.;

"The complete genome of the crenarchaeon Sulfolbous solfataricum of the Complete Sensen C.W., Van der Oost J.;

"The complete Sensen C.W., Van
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SECE SULSO
P58191;
16-OCT-2001
16-OCT-2001
16-OCT-2001
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ProDom; PD000039; Response_reg;
SMART; SM000387; HATPase_c; 1.
SMART; SM00073; HPT; 2.
SWART; SM00388; H18KA; 1.
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SMART; SM00448; REC; 2.
TIGREPAMS; TIGRE00229; SERSOTY_box;
PROSITE; PSS0109; HIS_KIN; 1.
PROSITE; PSS0113; PAC; 1.
PROSITE; PSS0112; PAS; 1.
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DOMAIN 1
TRANSMEM 26
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Sensory transduction; Transferase; Kinase; Phosphorylation; Transmembrane; Inner membrane; Transcription regulation; 3D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gamma subunit
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                                                                                                                                                                                                                                                                                                                                                                                                            Archaea; Crenarchaeota;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Sulfolobus solfataricus
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  FUNCTION:
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8; Conserv
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40, Last sequence update)
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CYTOPLASMIC
PAS.
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Pred. No. 4.7;
6; Mismatches 1
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D->A: LOSS OF ACTIVITY.
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MISSING (IN REF. 2).
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PHOSPHORYLATION (PROBABLE).
PHOSPHORYLATION (PROBABLE).
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export
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RESULT 10
Y4CG_RHISN
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Best Local
PROSITE; PS00397; RECOMBINASES_1; 1.
PROSITE; PS00398; RECOMBINASES_2; 1.
Hypothetical protein; DNA recombinat DNA invertase; Plasmid.
ACT_SITE 23 23 TRANSIE
                                                                                      EMBL;
                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Entropean Bioinformatics Institute. There are no restrate by non-profit institutions as long as its content modified and this statement is not removed. Usage by and
                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
MEDLINE=97305956; PubMed=9163424;
Freiberg C.A., Fellay R., Bairoch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Y4CG_RHI
P55389;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produbetween the Swiss Institute of Bioinformatics the European Bioinformatics Institute. There a
                                                                                                                                                                                                                                        "Molecular basis of symbiosis between Nature 387:394-401(1997).
-i- SIMILARITY: BELONGS TO THE SITE-SE
                                                                                                                                                                                                                                                                               Freiberg C.A., Perret X.;
                                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOV-1997
15-JUN-2002
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InterPro; IPR004795; SecE_euk_arch.
TIGREAMS; TIGR00327; secE_euk_arch; 1.
PROSITE; PS01067; SECE_SEC61G; FALSE_NEG.
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-!- SIMILARITY: BELONGS TO THE SECE/SEC61-GAMMA FAMILY.
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-!- SUBCELLULAR LOCATION: Tail-anchored
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                                                             Pfam; PF00239; resolvase;
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                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=394;
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                                                                                                                                                                                                                                                                                                                                                                    Bacteria; Proteobacteria;
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                                                                            InterPro;
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P03012; 2RSL.
Pro; IPR001822; Recombinase.
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                          recombination; DNA integration; DNA-binding;
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4; Mismatches
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  TRANSIENT COVALENT LINKAGE TO DNA DURING
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                                                                                                                                                                                                                                                                                                                                                                   subdivision; Rhizobiaceae group;
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                                                                                                                                       noved. Usage by and for commercial (See http://www.isb-sib.ch/announce/
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Matches 8
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Blattner F.R., Plunkett G. III, Bloch C.A., Perna N.T., Burland V., Riley M., Collado-Vides J., Glasner J.D., Rode C.K., Mayhew G.F., Gregor J., Davis N.W., Kirkpatrick H.A., Goeden M.A., Rose D.J., Mau B., Shao Y.;
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MEDLINE=99047671; PubMed=9830034;
Georgellis D., Kwon O., De Wulf P
"Signal decay through a reverse p
                                                                                                       Georgellis D., Lynch A.S., Lin E.C.C.; "In vitro phosphorylation study of the a transduction system of Escherichia coli. J. Bacteriol. 179:5429-5435(1997).
                                                                                                                                                                         STRAIN=M15;
MEDLINE=97431492; PubMed=9286997;
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STRAIN=K12
                                                      STRAIN=M15;
                                                                        CHARACTER I ZATION
                                                                                                                                                                                                               CHARACTERIZATION
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277:1453-1474(1997).
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PDB; 2A0B; 17-JUN-98.
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J. Biol.
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Kato M., Mizuno T., Shimizu T., Hakoshima T.;
Refined structure of the histidine-containing-phosphotransfer
domain of the anaerobic sensor kinase ArcB from Escherichia col
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kwon O., Georgellis D., Lin E.C.C.,
"Phosphorelay as the sole physiological
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J. Bacteriol. 182:3858-3862(2000).
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MEDLINE=98437504; PubMed=9761838;
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Kato M., Mizuno T.,
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cta Crystallogr. D 55:1842-1849(1999).

repure the two-component regulatory system sensor-regulator protein for anaerobic repression of the modulon. Activates arch via a four-step phosphorelay. Ar also dephosphorylate arch by a reverse phosphorelay invo 717 and Asp. 576.
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1. Chem. 273:32864-32869(1998)
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MEDLINE=95291464; PubMed=7773415;

Thomas C.M., Smith C.A., Ibbotson J.P.,

"Evolution of the korA-oriV segment of I

Microbiology 141:1201-1210(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Plasmid;
SEQUENCE
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InterPro; IPR003594; ATPbind_ATPase.
InterPro; IPR004359; HIS_KinA.
R InterPro; IPR003661; His_KinA.
R InterPro; IPR0002570; Hpt.
R InterPro; IPR000700; PAS-assoc_C.
R InterPro; IPR0007149; PAS-domain.
JR InterPro; IPR001789; Response reg.
InterPro; IPR001789; Response reg.
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Hayashi T., Makino K., Ohnishi M., Kurokawa K., Ishii K., Yokoya Han C.-G., Ohtsubo E., Nakayama K., Murata T., Tanaka M., Tobe T Iida T., Takami H., Honda T., Sasakawa C., Ogasawara N., Yasunag Kuhara S., Shiba T., Hattori M., Shinagawa H.;
"Complete genome sequence of enterohemorrhagic Escherichia coli "Complete genome sequence of enterohemorrhagic Escherichia Coli "Complete genome sequence of enterohemorrhagic Escherichia Coli "Complete genome sequence of enterohemorrhagic Escherichia Coli "Complete genome sequence of enterohemorrhagic Escherichia Coli "Complete genome sequence of enterohemorrhagic Escherichia Coli "Complete genome sequence of enterohemorrhagic Escherichia Coli "Complete genome sequence of enterohemorrhagic Escherichia Coli "Complete genome sequence of enterohemorrhagic Escherichia Coli "Complete genome sequence of enterohemorrhagic Escherichia Coli "Complete genome sequence of enterohemorrhagic Escherichia Coli "Complete genome sequence of enterohemorrhagic Escherichia Coli "Complete genome sequence of enterohemorrhagic Escherichia Coli "Complete genome sequence of enterohemorrhagic Escherichia Coli "Complete genome sequence of enterohemorrhagic Escherichia Coli "Complete genome sequence of enterohemorrhagic Escherichia Coli "Complete genome sequence of enterohemorrhagic Escherichia Coli "Complete genome sequence of enterohemorrhagic Escherichia Coli "Complete genome sequence of enterohemorrhagic Escherichia Coli "Complete genome sequence of enterohemorrhagic Escherichia Coli "Complete genome sequence of enterohemorrhagic Escherichia Coli "Complete genome sequence of enterohemorrhagic Escherichia Coli "Complete genome sequence of enterohemorrhagic Escherichia Coli "Complete genome sequence of enterohemorrhagic Escherichia Coli "Complete genome sequence of enterohemorrhagic Escherichia Coli "Complete genome sequence of enterohemorrhagic Escherichia Coli "Complete genome sequence of enterohemorrhagic "Complete genome sequen
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                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a c between the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is
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DNA Res. 8:11-22(2001).

-i- FUNCTION: Member of the two-component regulatory system arcB/arcA.
Sensor-regulator protein for anaerobic repression of the arc
modulon. Activates arcA via a four-step phosphorelay. ArcB can
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STRAIN=0157:H7 / EDL933 /
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PF02518;
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SM00073; HPT; 1.

SM00388; HisKA; 1.

SM00091; PAS; 1.

SM00448; REC; 1.
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PF00512;
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Best Local S
Matches 17
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01-JAN-1990
01-NOV-1995
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Kawarabayasi Y., Hino Y., Horikawa H., Yamazaki S., Haikawa Jin-no K., Takahashi M., Sokine M., Baba S.-I., Ankai A., K Hosoyama A., Fukui S., Nagai Y., Nishijima K., Nakazawa H., Takamiya M., Masuda S., Funahashi T., Tanaka T., Kudoh Y., Yamazaki J., Kushida N., Oguchi A., Aoki K.-I., Kubota K., Nakamura Y., Nomura N., Sako Y., Kikuchi H.;
"Complete genome sequence of an aerobic hyper-thermophilic
                                                                                                                                                 STRAIN=ATCC 11416;
MEDLINE=87248111; PubMed=3036668;
Epp J.K., Burgett S.G., Schoner B.E.;
Cloning and nucleotide sequence of a carbomycin-resistance
Streptomyces thermotolerans.";
Gene 53:73-83(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                     Actinomycetales;
NCBI_TaxID=80858;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Streptomyces thermotolerans.
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                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                 Bacteria; Actinobacteria; Actinobacteria (class); Actinobacteridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Plasmid
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PROSITE; PS01144; RIBOSOMAL L31E; PALSE_NEG
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                                                                FUNCTION: PROBABLE RNA METHYLASE. CARB CONFERS RESISTANCE TO CARBOMYCIN AND SEVERAL OTHER MACROLIDES, LINCOMYCIN AND VERNAMYCIN B, BUT NOT TO ALL MACROLIDE-LINCOSAMIDE-STREPTOGRAMIN
                  B ANTIBIOTICS.
INDUCTION: THE EXPRESSION
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(Rel. 13, Last sequence update)
(Rel. 32, Last annotation updat
(Rel. 32, Cast annotation)
(Carbom
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Best Local
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Q9CNG8;
15-JUN-2002
InterPro; IPR000715; Glycos transf_4.

Pfam; PF00953; Glycos transf_4; 1.

Lipopolysaccharide biosynthesis; Glycosyltransferase;

Transmembrane; Inner membrane; Complete proteome.
                                                                                use by non-profit institutions as long modified and this statement is not removed. entities requires a license agreement (See lor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                               May B.J., Zhang Q., Li L.L., Paustian M.L., Whittam T.S. "Complete genomic sequence of Pasteurella multocida Pm70 Proc. Natl. Acad. Sci. U.S.A. 98:3460-3465 (2001).
-I- CATALYTIC ACTIVITY: UDP-N-acetyl-D-glucosamine + und monophosphate = UMP + undecaprenyl N-acetyl-alpha-D-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-JUN-2002 (Rel. 41, Created)
15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Putative undecaprenyl-phosphate alpha-N-acetylglucosaminyltransferase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced between the Swiss Institute of Bioinformatics and the European Bioinformatics Institute. There are r
                                                                                                                                                       This SWISS-PROT entry is copyright. It is produ
between the Swiss Institute of Bioinformatics
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                                                     EMBL; AE006082; AAK02547.1;
                                                                                                                                       the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=747;
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Antibiotic resistance; Transferase; Methyltransferase; Plasmid.
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                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=21145866; PubMed=11248100;
                                                                                                                                                                                                                                                                                                                                                                                                                                           Pasteurella
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bacteria; Proteobacteria;
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                                                                                                                                                                                                                            pyrophosphate.

COPACTOR: Magnesium and manganese (By similarity).

PATHWAY: Lipopolysaccharide biosynthesis.

SUBCELLULAR LOCATION: Integral membrane protein. I
                                                                                                                                                                                                                SIMILARITY: BELONGS TO THE GLYCOSYLTRANSFERASE FAMILY 4. WECA
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IPR000051; SAM_bind.
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Pred. No. 1.3;
3; Mismatches
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ıltocida Pm70.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; AE003459; AAF46958.2; ALT_SEQ.
FlyBase; FBgn0041235; Gr59c.
Hypothetical protein; Receptor; G-protein coupled receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=21407712; PubMed=11516643;
Dunipace L., Meister S., McNealy C
"Spatially restricted expression or
Drosophila gustatory system.";
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Clyne P.J., Warr C.G., Carl
"Candidate taste receptors
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CYTOPLASMIC (POTENTIAL).
6 (POTENTIAL).
EXTRACELLULAR (POTENTIAL).
7 (POTENTIAL).
CYTOPLASMIC (POTENTIAL).
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A COle S.T., Brosch R., Parkhill J., Garnier T., Churcher C., Har.

A Gordon S.V., Eiglmeier K., Gas S., Barry C.B. III, Tekaia F.,

Badcock K., Basham D., Brown D., Chillingworth T., Connor R.,

A Davies R., Devlin K., Feltwell T., Gentles S., Hamlin N., Holro

A Hornsby T., Jagels K., Krogh A., McLean J., Moule S., Murphy L.

A Oliver S., Osborne J., Quail M.A., Rajandream M.A., Rogers J.,

A Rutter S., Seeger K., Skelton S., Squares S., Squares R.,

Sulston J.E., Taylor K., Whitehead S., Barrell B.G.;

T "Deciphering the biology of Mycobacterium tuberculosis from the

T complete genome sequence.";

Nature 393:537-544(1998).
AERPE

RL31 AERPE

Q9YD25;

30-MAY-2000

30-MAY-2000

15-JUN-2002
                                                                                                                                                                                                                                                                                                                               CONFLICT
CONFLICT
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Submitted (APR-2001) to
-!- SIMILARITY: BELONGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN=CDC 1551 / Oshkosh;
Fleischmann R.D., Alland D., Eisen J.A., Carpenter
Fleischmann R.D., Alland D., Eisen J.A., Carpenter
Peterson J., DeBoy R., Dodson R., Gwinn M.L., Haft
Kolonay J.F., Nelson W.C., Umayam L.A., Ermolaeva M
Beleber A., Utterback T., Weidman J., Khouri H., Gi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a continuous the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict
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Actinomycetales; Corynebacterineae; Mycobacteriaceae;
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Mycobacterium tuberculosis.
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, Gill J., Mikula A
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Copyright (c) 1993 - 2003 Compugen Ltd
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D85985
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A;Experimental source: strain O157:H7, substrain RIMD 0509952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA Res. 8, 11-22, 2001
A;Title: Complete genome sequence of enterohemorrhagic Escherichia coli 0157:H7
A;Reference number: A99629; MUID:21156231; PMID:11258796
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C;Superfamily: aerobic respiration control sensor protein arcB;
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C;Species: Escherichia coli
C;Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                             iller, L.; Grotbeck, E.J.; Davis, Nature 409, 529-533, 2001
                                                                                                                                                                                                                                                                     ;Residues: 1-778 <STO>
;Cross-references: GB:AE005174; NID:g12517831; PIDN:AAG58344.1; GSPDB:GN00145;
;Experimental source: strain O157:H7, substrain EDL933
                                                                                                                                                                                                                                                                                                                                                         ;Title: Genome sequence of enterohemorrhagic Escherichia coli O157:H7;Reference number: A85480; MUID:21074935; PMID:11206551;Accession: D85985
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Residues: 1-778 <HAY>
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;Date: 18-Jul-2001 #sequence_revision 18-Jul-2001 #text_change 03-Aug-2001
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N.; Yasunaga, T.; Kuhara, S.; Shiba, T.; Hattori,
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Dimalanta, E.;
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Potamousis,
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R;She, Q.; Singh, R.K.; Confalonieri, F.; Zivanovic, Y.; Allard, G.; Awa, Jong, I.; Jeffries, A.C.; Kozera, C.J.; Medina, N.; Peng, X.; Thi-Ngoc, arrett, R.A.; Ragan, M.A.; Sensen, C.W.; Van der Oost, J. submitted to GenBank, April 2001
A;Description: Sulfolobus solfataricus complete genome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Molecule type: DNA
A;Residues: 1-62 <KUR>
A;Cross-references: GB:AE006641; NID:g13813489; PIDN:AAK40677.1; GSPDB:GN00155
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C;Species: Sulfolobus solfataricus
C;Date: 24-May_2001 #sequence_revision 24-May-2001 #text_change 17-May-2002
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C;Superfamily: yeast SSS1 protein
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A; Accession: F90177
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                                                                                                                                                               C_iSuperfamily: rRNA (adenine-N6-)-methyltransferase C_iKeywords: methyltransferase; S-adenosylmethionine
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A;Title: Translational attenuation control
A;Reference number: A27741; MUID:88169508;
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A; Residues: 1-319 < KAM>
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208 RHEWRLLGRVSRREFRPVPRVDSGILRIERR
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                                                                                     Conservative
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                                                                                                                                                                                                                                             GB:M19269; NID:g153251; PIDN:AAA26742.1; PID:g153253
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Pred. No.
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                                                                                                            DB 2;
15;
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            238
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                                                                                                                            Length 319
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                                                                                         Gaps
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A; Experimental C; Genetics: A; Note: a209R
                                                                                        R;Epp, J.K.; Burgett, S.G.; Schoner, B.E. gene 5, 73-83, 1987
A;Title: Cloning and nucleotide sequence of a carbomycin-resistance A;Reference number: A26512; MUID:87248111; PMID:3036668
A;Accession: A26512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   probable ribosomal protein L31 APE1087 C;Species: Aeropyrum pernix C;Date: 20-Aug-1999 #-----
A;Cross-references:
C;Superfamily: rRNA
                                    A; Residues: 1-299 < EPP>
                                                                                                                                                                                          C;Species: Streptomyces sp.
C;Date: 11-Mar-1988 #sequence_revision 11-Mar-1988 #text_change 18-Jun-1999
                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Experimental source: strain K1
C;Genetics:
A;Gene: APE1087
C;Superfamily: rat ribosomal pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                       A; Molecule type: DNA
                                                                       A;Status: preliminary
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A; Accession: T17699
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C;Species: Chlorella virus PBCV-1
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: DNA
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Matches 17
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Matches
                                                                                                                                                                                     Accession: A26512
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Date: 20-Aug-1999 #sequence_revision
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Best Local (
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                                                                                                                                                                                                                                                                                                                                       WVYVVNLRRVYWGRRTRRA-IRAVRMVREFVRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rat ribosomal protein L31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Y.; Hino, Y.; Horikawa, H.; Yamazaki, S.; Haikawa, Y.; Jin-no, Ya, M.; Masuda, S.; Funahashi, T.; Tanaka, T.; Kudoh, Y.; Yamaz
                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
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GB:M16503; NID:g153199; PIDN:AAC32026.1; PID:g153200 (adenine-N6-)-methyltransferase
                   GB:M16503;
                                                                                                                                                                                                                                                                                                                                                                                                                              30.5%;
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Library,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      quence of an aerobic hyper-thermophilic Crenarchaeon, Aeropy MUID:99310339; PMID:10382966
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Pred. No. 2.4;
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Pred. No. 2
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strain NC64A
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Yamazaki,
                                                                                                                             from Streptomyo
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J.; K
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A;Gene: arcB
A;Map position: 69.5 min
A;Map position: 69.5 min
C;Superfamily: aerobic respiration control sensor protein
C;Keywords: autophosphorylation; phosphohistidine; phosphc
E;23-50/Domain: transmembrane #status predicted <TMl>

phosphoprotein; phosphotransferase;

regulator homo

PID:g40951

A;Molecule type: DNA
A;Residues: 1-468,'TG',469-776 <TUC>
A;Cross-references: EMBL:X53315; NID:g40950; PIDN:CAA37397.1;
C;Genetics:

A; Title: The arcB gene of Escherichia coli A; Reference number: JU0295; MUID:90355832; A; Accession: JU0295

encodes a sensor-regulator protein PMID:2201868

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anaer

PIDN:AAC76242.1; PID:g1789603

A;Cross-references: GB:AE000400; GB:U00096; NID:g2367203; A;Experimental source: strain K-12, substrain MG1655 R;Iuchi, S.; Matesuda, Z.; Pujiwara, T.; Lin, E.C.C. Mol. Microbiol. 4, 715-727, 1990

A; Molecule type: DNA A; Residues: 1-776 <BLAT>

A; Reference number: A; Accession: D65112

Science 277, 1453-1462, 1997 A;Title: The complete genome sequence of Escherichia coli A;Reference number: A64720; MUID:97426617; PMID:9278503

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A; Status: preliminary; nucleic acid sequence not shown; translation not shown

F;78-776/Domain: intracellular #status predicted <INT>F;526-637/Domain: response regulator homology <RRH>F;292/Binding site: phosphate (His) (covalent) #status

#status predicted

F;23-50/Domain: transmembrane #status predicted <TM1>F;59-77/Domain: transmembrane #status predicted <TM2>

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C;Date: 31-Dec-1991 #sequence revision 17-Oct-1997 #text_change 01-Mar-2002 C;Accession: D65112; JU0295; S11794 R;Blattner, F.R.; Plunkett III, G; Bloch, C.A.; Perna, N.T.; Burland, V.; P. R;Blattner, F.R.; Plunkett III, G; Bloch, C.A.; Perna, N.T.; Burland, V.; P. Rose; D.J.; Mau, B.; Shao, Y.
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Plasmid 36, 95-111, 1996
A;Title: Conservation of the genetic switch between replication and transfer A;Reference number: Z16434; MUID:97118926; PMID:8954881
                                                                        aerobic respiration control sensor protein arcB
C;Species: Escherichia coli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                plasmid maintenance protein kleG
C;Species: Enterobacter aerogenes
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                                                                                                            RGECAR
                                                                                                                          RESULT 11
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A; Residues: 1-89 < THO>
                                                                                                                                                                                                                                                                                                                                                                                                     A;Status: preliminary; translated from GB/EMBL/DDBJ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Species: Enterobacter aerogenes;Date: 11-Jun-1999;Date: 11-Jun-1999 #sequence_revision 11-Jun-1999
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Best Local
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Pred.
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Pred. No. 8.
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3.6;
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                                                                                          (EC 2.7.3.-) - Escherichia coli
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Rajandream, M.A., Rogers, J.; Rutter, S.; Seeger, K.; Skelton, S.; Squares, S. Nature 393, 537-544, 1998
A;Authors: Squares, R.; Sulston, J.E.; Taylor, K.; Whitehead, S.; Barrell, B.G. A;Title: Deciphering the biology of Mycobacterium tuberculosis from the complete A;Reference number: A70500; MUID:98295987; PMID:9834230
A;Accession: D70835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rajandream, M.A.; Rogers, Nature 393, 537-544, 1998 A;Authors: Sqares, R.; Su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Cole, S.T.; Brosch, R.; Parkhill, J.; Garnier, T.; Churcher, C.; Harris, D.; Connor, R.; Davies, R.; Devlin, K.; Feltwell, T.; Gentles, S.; Hamlin, N.; H. Rajandream, M.A.; Rogers, J.; Rutter, S.; Seeger, K.; Skelton, S.; Squares, S.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          hypothetical glycine-rich protein Rv0278c - Mycobacterium tuberculosis (strain C;Species: Mycobacterium tuberculosis C;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 20-Jun-2000
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                                                                                                                                                                                                                              ;Residues: 1-957 <COL>
;Cross-references: GB:
                                                                                                                                                                                                                                                                                                                                                                                                                      Connor, R.; Davies, R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;Superfamily:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;Residues: 1-1538 <COL>;Cross-references: GB:AL021841; GB:AL123456;
;Experimental source: strain H37Rv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Status: preliminary; nucleic acid sequence not shown; translation not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 20-Jun-2000; Date: 17-Jul-1998 #text_change 20-Jun-2000; Accession: H70846
                                                                                                                                                    ;Superfamily:
                                                                                                                                                                                                          Experimental source: strain H37Rv
                                                                                                                                                                                                                                                                  ;Molecule type: DNA
                                                                                                                                                                                                                                                                                  Status: preliminary; nucleic acid sequence not shown; translation not shown
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Best Local
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                                                                            Matches
                                                                                              Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                  Parkhill, J.; Garnier, T.; Churcher, C.; Harris, D.; Devlin, K.; Feltwell, T.; Gentles, S.; Hamlin, N.; H. J.; Rutter, S.; Seeger, K.; Skelton, S.; Squares, S.
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Pred. No. 7.9;
3; Mismatches
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Pred. No. 0.66;
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Pred. No. 7
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Holroyd,
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A;Experimental source: Strain 1021, megaplasmid pSymB A;Experimental source: Strain 1021, megaplasmid pSymB A;Experimental source: Strain 1021, megaplasmid pSymB A; Ampe, F; Ampe, F; Barloy-Hubler, Pela, D; Chain, P; Cowie, A.; Long, S.R.W.; Dreano, S.; Federspiel, N.A.; Fisher, R.F., L; Hyman, R.W.; Jones T. Science 293, 668-672, 2001

A;Authors: Kahn, D.; Kahn, M.L.; Kalman, S.; Keating, D.H.; Kiss, E.; Komp, C.; Lelaure, hebault, P.; Vandenbol, M.; Vorholter, F.J.; Weidner, S.; Wells, D.H.; Wong, K.; Yeh, K.; Title: The composite genome of the legume symbiont Sinorhizobium meliloti.

A;Reference number: A96039; MUID:21368234; PMID:11474104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R;Finan, T.M.; Weidner, S.; Wong, K.; Buhrmester, J.; Chain, P.; Vorholter, F.J.; He Proc. Natl. Acad. Sci. U.S.A. 98, 9889-9894, 2001
A;Title: The complete sequence of the 1,683-kb pSymB megaplasmid from the N2-fixing A;Reference number: A95842, MUID:21396508, PMID:11481431
A;Accession: H95974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C;Keywords: ĀTP; nucleotide binding; P-loop
F;371-565/Domain: ATP-binding cassette homology <ABC>
F;388-395/Region: nucleotide-binding motif A (P-loop)
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A;Title: Extension of the Rhizobium meliloti succinoglycan
regulator of succinoglycan biosynthesis.
A;Reference number: S60181; MUID:96133689; PMID:8544814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Cross-references: EMBL:Z50189; NID:g1143532; PIDN:CAA90568.1; PID:e191488; PID:g11435. A;Note: it is uncertain whether Met-1 (ATG), Val-29 (GTG) or Met-74 (ATG) is the initial
                                                                                                                                                       A; Genome: plasmid
                                                                                                                                                                                                                                  A; Contents: annotation
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C;Species: Rhizobium meliloti
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Status: preliminary
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Date: 24-Aug-2001 #sequence_revision 24-Aug-2001 #text
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                                                                                                Query Match
                                                                                                                                                                                   ;Gene: exsA; SMb20941
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nes 9; Conserv
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Pred. No. 8.8;
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1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
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| 50 | 50.5 | 50.5 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 52 | 52 | 52 | 52 | 52 |
| 26.3 | 26.6 | 26.6 | 26.8 | 26.8 | 26.8 | 26.8 | 26.8 | 26.8 | 26.8 | 26.8 | 27.4 | 27.4 | 27.4 | 27.4 | 27.4 |
| 85 | 221 | 141 | 4568 | 570 | 432 | 432 | 354 | 281 | 262 | 104 | 1210 | 1145 | 600 | 584 | 217 |
| N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| B45681 | S21333 | H85217 | T08030 | T32743 | T05236 | A34413 | C64000 | F85956 | C91111 | B82294 | A83306 | A59251 | F75424 | B82810 | B90765 |
| hypothetical 10.2K | • | hypothetical prote | dynein beta heavy | hypothetical prote | | atrial gland granu | hypothetical prote | probable transposa | | hypothetical prote | hypothetical prote | myosin - Acetabula | probable cell cycl | ABC transporter ni | hypothetical prote |

ALIGNMENTS

growth factor arg3.1 - C;Species: Rattus norve C;Date: 26-Jul-1996 #==

C;Species: Rattus norvegicus (Norway rat)
C;Date: 26-Jul-1996 #sequence_revision 26-Jul-1996 #text_change 04-Mar-2000
C;Accession: I58168; I59386

K.; Kaufmann, W.E.; Barnes, C.A.; Sanders, L.K.; Copeland, N.

encodes a novel cytoskeleton

wth factor and activity-regulated gene, I58168; MUID:95161073; PMID:7857651

from GB/EMBL/DDBJ

R;Lyford, G.L.; Yamagata, Neuron 14, 433-445, 1995

A; Accession: I58168 A; Reference number: A; Title: Arc, a growth

A;Status: preliminary; translated

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glycine-rich protein - carrot (fragment)
C:Species: Daucus carota (carrot)
C:Date: 20-Sep-1999 #sequence_revision 20-Sep-1999 #to
C:Accession: T14306
R:Lin, X.; Hwang, G.J.; Zimmerman, J.L.
submitted to the EMBL Data Library, January 1996
A:Description: Isolation and characterization of a div
A:Reference number: Z17968
A:Reference number: T14306
A:Status: preliminary; translated from GB/EMBL/DDBJ
A:Molecule type: mRNA
A:Residues: 1-111 <LIN>
                                                                                                                                                                                                                                                                                                  RESULT 2
T14306
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R;Link, W.; Konietzko, U.; Kauselmann, G.; Krug, M.; Schwanke, B.; Frey, U.; Kuhl, D.
Proc. Natl. Acad. Sci. U.S.A. 92, 5734-5738, 1995
A;Title: Somatodendritic expression of an immediate early gene is regulated by synaptic A;Reference number: I59386; MUID:95296386; PMID:7777577
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A;Cross-references: EMBL:U47097; NID:g1276970; PID:g1276971
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: mRNA
A; Residues: 1-208, 'V', 210-396 < RE2>
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7; Mismatches
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Pred. No. 1;
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; LIBRARY: NMLRIDT01
; CLONE: 472480
US-09-016-000-4
Query Match
Best Local Similarity 41.7%; Pred. No. 2.6e+02;
Matches 5; Conservative 5; Mismatches 2; Indels 0; Gaps 0;
Matches 5; Conservative 5; Mismatches 0; Gaps 0;
Search completed: June 9, 2003, 12:05:09
Job time: 9.17021 secs
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US-08-905-817-2
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Best Local Similarity 40.0%;
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Patent No. 5824777
                                                                         APPLICATION NUMBER: US/08/905,817
FILING DATE: 04-AUG-1997
CCLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/348,891
FILING DATE: 25-NOV-1994
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: PATCH, Andrew J.
REGISTRACE, NUMBER: 32,925
REFERENCE/DOCKET NUMBER: KP
TELECOMMUNICATION INFORMATION:
TELEPHONE: 703-521-2297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS
LENGTH: 525 amino acid
                                                                                                                                                                                SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/905,817
                                                                                                                                                                                                                               COMPUTER READBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                             FILING DATE: 10-MAR-PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION:
TITLE OF INVENTION:
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                                                                                                                                                                                                                                                                                                                                    CITY: Arlington
STATE: Virginia
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                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                  COUNTRY:
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                 CATION NUMBER:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SASAKI, Keiko
MORI, Takayuki
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                                                 10-MAR-1992
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JMBER: JP 3-293625
14-OCT-1991
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Pred. No. 2
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                                                 TYPE: amino acid
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                                                               556 amino acids
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; MOLECULE TYPE: protein US-08-905-817-2
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INFORMATION FOR SEQ ID NO:
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INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
NAME: Billings, Lucy J
REGISTRATION NUMBER: 36,749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Guegler, Karl G.
TITLE OF INVENTION: PROTEIN KINASE MOLECULES
NUMBER OF SEQUENCES: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
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NAME: PATCH, Andrew J.
                                                                                                            REFERENCE/DOCKET NUMBER: PF
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650-855-0555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA:
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REGISTRATION NUMBER: 32.
REFERENCE/DOCKET NUMBER:
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SOFTWARE: FastSE(
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GY: linear
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Pred. No. 2
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COMPUTER READBLE FORM:
MEDIUM TYPE: Floppy disk 1.44Mb, 3.5"
MEDIUM TYPE: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: MS-DOS
SOFTWARE: MOTOPERITECT 6;
SOFTWARE: ASCII (DOS) Text
CURRENT APPLICATION DATA:
ADDITICATION NUMBER: US/08/436,703B
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Best Local Similarity
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 39 amino acids
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                                                                                                                                                                                       NAME: Rohm, Benita J.
REGISTRATION NUMBER: 28,664
REFERENCE/DOCKET NUMBER: 7NF
TELECOMMUNICATION INFORMATION:
TELEPHONE: 313-965-1976
           MOLECULE TYPE: peptide ORIGINAL SOURCE: ORGANISM: N/A PUBLICATION INFORMATION:
                                                                                                                                                                                                                                                          APPLICATION NUMBER: N/A FILING DATE: N/A ATTORNEY/AGENT INFORMATION: NAME: ROhm, Benita J.
                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: 514
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES: 1:
CORRESPONDENCE ADDRESS:
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ORIGINAL SOURCE:
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                                                                                TOPOLOGY: N/
                                                                                                            TYPE: amino acid
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AUTHORS:
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o. 5919761
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                                                                                                                         39 amino acids
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VENTION: NOVEL PEPTIDES FOR
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Andrews, Philip
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Pred. No. 14;
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Best Local Similarity
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                      STREET: 745
STREET: 745
CITY: Arlington
STATE: Virginia
TANTRY: USA
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APPLICANT:
APPLICANT:
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
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LENGTH: 16 amino acids
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APPLICATION NUMBER:
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
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                                                                                                                                                                      NUMBER OF SEQUENCES:
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Similarity 55.0%;
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MORI, Takayuki
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FOR THE INTRACELLULAR ADDRESSING OF ACTIVE MOLECULES
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Pred. No. 8.
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Pred. No. 14;
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Best Local Similarity
"arches 9; Conserv
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                                                             Matches
                                                                                         Query Match
                                                                            Best Local
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EARLIER APPLICATION NUMBER: DE 198 46 493.2
EARLIER FILING DATE: 1998-10-09
NUMBER OF SEQ ID NOS: 107
SOFTWARE: Patentin Ver. 2.1
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APPLICANT: Bristol-Myers Squibb,
APPLICANT: Beyer, Stefan
                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/09/413,814
                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: DNA sequences for enzymatic synthesis of polyketide TITLE OF INVENTION: heteropolyketide compounds FILE REFERENCE: PCT/US 99/23535
                                                                                                                                                                                                                                                                                                                                               APPLICANT: Mueller, Joachim
APPLICANT: Reichenbach, Hans
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NFORMATION FOR SEQ ID NO:
                                                                                                                                                        LENGTH: 882
TYPE: PRT
                                                                                                                                       ORGANISM: Sorangium cellulosum
                                                                                                                                                                                                                                                                                                                                                                                                                                                           PPLICANT: Beyer, Ste
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NAME: Yates, Michael E.; Sweeney,
NAME: Roth, Michael J.; & Simon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYI
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 601
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                                                                            Similarity
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Hofle, Gerhard
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RRAPRRVRRLVGRRLRRRARRALRR 625
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ldberg, Steven L
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                                                                            60.0%;
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& Simon, Soma G.
                                                           2;
                                                                        Score 48.5; DB 4
Pred. No. 1.2e+02
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Pred. No. 5
                                                             Mismatches
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US-08-436-703B-17
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; ORGANISM: Helicobacter pylori
US-09-092-315-8
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Patent No. 6399337
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Best Local Similarity
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TITLE OF INVENTION: ALPHA-1, 3-FUCOSYLTRANFERASE
FILE REFERENCE: 07254/049001
CURRENT APPLICATION NUMBER: US/09/092,315
CURRENT FILING DATE: 1998-06-05
EARLIER APPLICATION NUMBER: US 60/048,857
EARLIER FILING DATE: 1997-06-06
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INFORMATION FOR SEQ ID NO:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 454
                                                                                                                                                                                                                                                COMPUTER: IBM PC compatible
OPERATING SYSTEM: MS-DOS
SOFTWARE: WordPerfect 6;
SOFTWARE: ASCII (DOS) Text
CURRENT APPLICATION DATA;
                                            NAME: Rohm, Benita J.
REGISTRATION NUMBER: 28,664
REFERENCE/DOCKET NUMBER: 7WI
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                           FILING DATE: 08-MAY:
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
                                                                                                      APPLICATION NUMBER: N/A
FILING DATE: N/A
ATTORNEY/AGENT INFORMATION:
NAME: Rohm, Benita J.
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                                TELEPHONE:
                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE:
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COUNTRY: United States of America
                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: Detroit
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5919761
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Andrews, Philip C.
Stanley, James C.
PENTION: NOVEL PEPTIDES FOR
                                  313-965-1976
                                                                                                                                                                                                                                                                                                                                                 Floppy disk 1.44Mb, 3.5"
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Pred. No. 1
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                                                       Query Match
Best Local S
Matches 9
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LENGTH: 2618
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APPLICANT: Rao, A
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SOFTWARE: PatentIn Ver. 2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT
ORGANISM: Sorangium cellulosum
                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER: 02
TELECOMMUNICATION INFORMATION:
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                                                                                                                                                                                                                                                                                                                      FILING DATE: 06/18/93
ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: Microsoft Windows No. 5607914epad CURRENT APPLICATION DATA:
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                                                                                                                                              TOPOLOGY:
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                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
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                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/179,632
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FILING DATE: 1998-10-09
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                                                       Similarity 9; Conserv
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RRIYRAIRHIPRRIRGWLRR 20
                           RRVRRVWRRVVRVVRRWVRR 24
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                                                                                                                                                                                     31 amino acids
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(515) 245-3634
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DN: SYNTHETIC ANTIMICROBIAL PEPTIDES
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                                                                    Score 49; DB
Pred. No. 5.1
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Pred. No. 2e+02;
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                                                                                   Length 31;
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GENERAL INFORMATION:
APPLICANT: Pioneer Hi-Bred Internations Synthetic ANT.
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Best Local Similarity
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                                                                                                                                                                     NUMBER OF SECULIARY OF SEC
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APPLICATION NUMBER: US 08/079,512
FILING DATE: 18-JUN-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
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                                                                                        COMPUTER READABLE FORM:
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CORRESPONDENCE ADDRESS:
CURRENT APPLICATION DATA:
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           COMPUTER: IBM Compatible
OPERATING SYSTEM: MS-DOS/Microsoft V
SOPTWARE: Microsoft Windows Notepad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Bobrowicz, Donna REGISTRATION NUMBER: 32. REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/0 FILING DATE: 12-MAY-1995 CLASSIFICATION: 530
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STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS:
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OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                   MEDIUM TYPE: Diskette, 3.5 inch, 1.44 Mb storage
                                                                                                                           COUNTRY:
                                                                                                                                                STATE:
                                                                                                                                                               STREET: 700 Capital Square, CITY: Des Moines
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                                                                                                                                                Iowa
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                                                                                                                                                                                                                                                       Pioneer Hi-Bred International, Inc.
NVENTION: SYNTHETIC ANTIMICROBIAL PEPTIDES
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (515) 334-6883
                                                                                                                           United States
                                   IBM Compatible SYSTEM: MS-DOS/Microsoft Windows
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PIONEER HI-BRED INTERNATIONAL, INC
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CORRESPONDENCE ADDRESS:

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Best Local Similarity 45.5%;
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/FR/91/00855
FILING DATE: 29-OCT-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 9013579
FILING DATE: 31-OCT-1990
                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                        tent No.
                                                   APPLICANT: MOLINAS, CATHERINE
APPLICANT: COURVALIN, PATRICE
TITLE OF INVENTION: POLYPEPTIDES IMPLICATED IN THE
TITLE OF INVENTION: EXPRESSION OF RESISTANCE TO GLYCOPEPTIDES, IN PARTICULAR
TITLE OF INVENTION: IN GRAM-POSITIVE BACTERIA, NUCLECTIDE SEQUENCE CODING FOR
TITLE OF INVENTION: THESE POLYPEPTIDES AND USE FOR DIAGNOSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 2254 amino aci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 435
PRIOR APPLICATION DATA:
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/174,682
PILING DATE: 28-DEC-1993
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                    APPLICANT: ARTHUR, MICHEL
APPLICANT: DUKTA-MALEN, SYLVIE
APPLICANT: MOLINAS, CATHERINE
APPLICANT: COURVALIN, PATRICE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: protein
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Oblon, No. 5871910ma
REGISTRATION NUMBER: 24,61
REFERENCE/DOCKET NUMBER: 6
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FILING DATE: 10-AUG-1992
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: PatentIn Release #1.0, Version #1.25
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o. 6013508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           amino acid
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248855 OPAT UR
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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (703) 413-3000
                        ADDRESS
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Pred. No. 1
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; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-980-357-28
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US-09-413-814-28
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Sequence 28, Appr-
No. 6225064
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Best Local Similarity
Matches 10; Conserv
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INFORMATION FOR SEQ ID NO: 2
SEQUENCE CHARACTERISTICS:
LENGTH: 2254 amin
                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                     APPLICANT: Cino, Paul M
APPLICANT: Dougherry, Brian A
APPLICANT: Goldberg, Steven L
APPLICANT: Hofle, Gerhard
APPLICANT: Mueller, Joachim
                                                                                                                                                                                             APPLICANT: Beyer, Stefan
APPLICANT: Bloecker, Helmut
                                                                                                                                                                                                                                   APPLICANT: Gesellschaft fuer Biotechnologische Forschung mbH
APPLICANT: Bristol-Myers Squibb, Co.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 29-OCT-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 9013579
FILING DATE: 31-OCT-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIA Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: 24,618
REFERENCE/DOCKET NUMBER: 66
TELECOMMUNICATION INFORMATION:
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PRIOR APPLICATION DATA:
APPLICATION NUMBER:
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APPLICATION NUMBER: U
FILING DATE: 28-DEC-1
PRIOR APPLICATION DATA:
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FILING DATE: 05-AUG-1994
APPLICATION NUMBER: US 08/174,682
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CLASSIFICATION:
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                                                                                                                                                                                                                                                                                                                                                                                                     1627 RAVRSVVRYWETVPRLLARWTK 1648
T: Mueller, Joachim
T: Reichenbach, Hans
INVENTION: DNA sequences for enzymatic synthesis of polyketide
INVENTION: heteropolyketide compounds
ERENCE: PCT/US 99/23535
                                                                                                                                                                                                                                                                                                                                                                                                                                       2 RWVRRVRRVWRRVVRVVRRWVR 23
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Y: U.S.A.
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(703) 413-2220
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10-AUG-1992
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Pred. No.
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Perfect score:
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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Match
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Gapop 10.0 , Gapext 0.5
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   Issued_Patents AA:*

i /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*

c/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*

c/cgn2_6/ptodata/1/iaa/6A_COMB.pep:*

/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*

c/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*

c/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
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525
1088
1088
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16
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US-08-286-219A-28
US-08-980-357-28
US-08-413-814-28
US-08-4179-632-9
US-08-414-174A-9
US-09-413-814-78
US-09-92-315-8
US-09-92-315-8
US-08-436-703B-5
US-08-436-703B-5
US-08-436-703B-5
US-08-436-703B-5
US-08-905-817-2
US-09-340-154-65
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US-09-340-154-65
US-09-340-154-65
US-09-35-7170-7
US-08-905-9338-65
US-09-257-770-7
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Sequence 31, Appl
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Sequence 2, Appli
Sequence 65, Appli
Sequence 67, Appli
Sequence 7, Appli
Sequence 7, Appli
Sequence 2, Appli
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   NUMBER OF SEQUENCES:
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| RESULT 2 US-08-286-819A-28 Sequence 28, Application US/08286819A ; Patent No. 5871910 ; GENERAL INFORMATION: APPLICANT: ARTHUR, MICHEL ; APPLICANT: DUKTA-MALEN, SYLVIE APPLICANT: MOLINAS, CATHERINE APPLICANT: COURVALIN, PATRICE TITLE OF INVENTION: POLYPETIDES IMPLICATED IN THE TITLE OF INVENTION: EXPRESSION OF RESISTANCE TO GLYCOPEPTIDES, IN PARTICULAR TITLE OF INVENTION: IN GRAM-POSITIVE BACTERIA, NUCLEOTIDE SEQUENCE CODING FOR TITLE OF INVENTION: THESE POLYPEPTIDES AND USE FOR DIAGNOSIS | Qy 3 WVRRVRRVWRRVVRRWVRR 24 | Query Match 40.0%; Score 52; DB 4; Length 770; Best Local Similarity 59.1%; Pred. No. 40; Matches 13; Conservative 0; Mismatches 7; Indels 2; Gaps 1; | TYPE: PR ORGANISM S-09-245-24 | CURRENT FILLING DATE: 1999-02-05; CURRENT FILING DATE: 1999-02-05; NUMBER OF SEQ ID NOS: 71 ; SOFTWARE: FastSEQ for Windows Version 4.0 ; SOFTWARE: FastSEQ for Windows Version 4.0 | APPLICANT: Mushahwar, Isa TITLE OF INVENTION: METHODS OF UTILIZ FILE REFERENCE: 6461.US.O1 | | APPLICANT: Erker, James APPLICANT: Chalmers, Mic APPLICANT: Simons, John | Patent No. 6395472 GENERAL INFORMATION: APPLICANT: Abbott APPLICANT: Leary, | RESULT 1 US-09-245-248B-31 ; Sequence 31, Application US/09245248B | ALIGNMENTS | 41.5 31.9 879 3 US-08-473-446-106 41 31.5 21 1 US-08-786-748A-53 41 31.5 21 1 US-08-98-682-50 41 31.5 21 2 US-08-932-682-50 41 31.5 21 2 US-08-932-682-53 41 31.5 21 2 US-08-932-682-53 41 31.5 23 2 US-08-505-486-63 41 31.5 23 3 US-09-340-154-63 41 31.5 23 3 US-09-340-154-63 41 31.5 23 4 US-09-482-611B-63 | 9 48 4 US-09-201-945-253 Sequence 25. 9 879 1 US-08-220-151-2 Sequence 2, 9 879 1 US-08-220-151-3 Sequence 2, 9 879 1 US-08-413-118-2 Sequence 3, 9 879 1 US-08-413-118-3 Sequence 3, 9 879 1 US-08-413-118-3 Sequence 3, 9 879 1 US-08-413-148-106 Sequence 2, 9 879 3 US-08-473-446-2 Sequence 2, 9 879 3 US-08-473-446-3 Sequence 3, | 41.5 31.9 48 3 US-08-871-355A-253 Sequence 25 |
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Search completed: June 9, 2003, 12:31:38 Job time: 32.0638 secs
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US-10-366-683-20533
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WIMBER OF SEQ ID NOS: 116213

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 16830

LENGTH: 142

TYPE: PRT

ORGANISM: Homo sapiens

US-60-452-680-16830
                                                                                                                                                                                                                                          ; TYPE: PRT
; ORGANISM: Pseudomonas aeruginosa
US-10-366-683-20533
                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 09/252,991
PRIOR FILING DATE: 1999-02-18
NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 20533
LENGTH: 526
                                                                                                                                                        Query Match
Best Local Similarity 69.2
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 40.0
Best Local Similarity 44.8
Matches 13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 20533, Application US/10366683 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/10/366,683
CURRENT FILING DATE: 2003-02-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Rubenfield, Marc J.
APPLICANT: Nolling, Jork
APPLICANT: Deloughery, Craig
APPLICANT: Bush, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: ALZHEIMER'S DISEASE, METHODS OF DETECTION AND USES THEREOFFILE REFERENCE: CL001450
                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Bush, David
PITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
PITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/60/452,680 FILING DATE: 2003-03-07
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 RRWVRRVRRVW-RRVVR-----VVRRWVR 23
                                                                                                                 1 RRWVRRVRRVWRR 13
                                                                               RRWTRPARRHWRR 13
                                                                                                                                                                             40.0%;
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44.8%; Pred. No. 2e+02;
                                                                                                                                                          0; Mismatches

 Mismatches

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Pred. No. 5
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                                                                                                                                                                                                Length 526;
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WLRRNRLLWLLILRLRRNWLLR 80

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TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement FILE REFERENCE: 38-21(53313)B
CURRENT APPLICATION NUMBER: US/10/425,114
UNMER OF SEQ ID NOS: 73128
NUMBER OF SEQ ID NOS: 73128
TYPE: 77-139
RESULT 13
US-10-282-122A-49117
; Sequence 49117, Application US/10282122A
; GENERAL INFORMATION:
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Best Local Similarity
"hes 15; Conserv?
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US-10-425-114-66861
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US-10-425-114-52367
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SEQ ID NO 66861
LENGTH: 197
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                                                                                                                                                                                Matches
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TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(53313) B
CURRENT APPLICATION NUMBER: US/10/425,114
CURRENT FILING DATE: 2003-04-28
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                                                                                                                                                                                                                                                                OTHER INFORMATION: Clone ID: UC-ZMFLB73201H12_FLI.pep
                                                                                                                                                                                              Local Similarity
                                                                                                            58
                                                                                                                                            2 RWVRRVRRVWRRVV-----RVVRRWVR 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Zhou, Yihua
Kovalic, David K.
Screen, Steven E
Tabaska, Jack E
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                                                                                                                                                                            Score 53.5; DB 6;
Pred. No. 1.8e+02;
1; Mismatches 8;
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Pred. No. 76;
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                                                                                            RESULT 14
US-60-452-680-16830
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Best Local S
Matches 14
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LENGTH: 360
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SOFTWARE: Patentin version 3.1
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APPLICANT:
APPLICANT:
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CURRENT FILING DATE: 2003-02-20
PRIOR APPLICATION NUMBER: 60/191,078
PRIOR FILING DATE: 2000-03-21
PRIOR FILING DATE: 2000-03-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 60/230,335
PRIOR FILING DATE: 2000-09-06
PRIOR APPLICATION NUMBER: 60/230,347
PRIOR FILING DATE: 2000-09-09
PRIOR FILING DATE: 2000-09-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR FILING DATE: 2000-05-23
PRIOR APPLICATION NUMBER: 60/207,727
PRIOR FILING DATE: 2000-05-26
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/267,636
PRIOR FILING DATE: 2001-02-09
PRIOR APPLICATION NUMBER: 60/269,308
PRIOR FILING DATE: 2001-02-16
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NAME/KEY: MISC FEATURE
LOCATION: (270)...(270)
                                                                                                                                                                                     FEATURE:
NAME/KEY: MISC FEATURE
LOCATION: (342)...(342)
                                                                                                                                                                                                                                           NAME/KEY: MISC FEATURE LOCATION: (272)..(272) OTHER INFORMATION: X=any
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                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Burkholderia fungorum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/257,931 FILING DATE: 2000-12-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/253,625
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293
                                                                         14;
                                                                                            Similarity
RWCGRRRFCWRRGRGFWRRLWQSRCRPQRRWLRR 326
                                 RWV-----RRVRRVWRRV----VRVVRRWVRR 24
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Forsyth, R.
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Malone, Chery
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                                                                                      40.4%;
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Pred. No. 3.8e+02;
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                                                                         Gaps
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Sequence 16830, Application US/60452680 GENERAL INFORMATION:

APPLICANT: CARGILL, Michele APPLICANT: GRUPE, Andrew TITLE OF INVENTION: GENETIC

POLYMORPHISMS ASSOCIATED

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; OTHER INFORMATION: Clone ID: 700155612_FLI.pep US-10-425-114-53360
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-419-128-16956
                                                                                                   APPLICANT: Tabaska, Jack E
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(53313)B
CURRENT FILING DATE: 003-04-28
NUMBER OF SEQ ID NOS: 73128
SEQ ID NO 53360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 16956, Appl GENERAL INFORMATION:
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NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 16956
LENGTH: 387
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CURRENT APPLICATION NUMBER: US/10/419,128
CURRENT FILING DATE: 2003-04-21
PRIOR APPLICATION NUMBER: US/09/252,991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                          APPLICANT: Liu, Jingdong APPLICANT: Zhou, Yihua
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                                     FEATURE:
                                               ORGANISM: Zea mays
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRI
                                                                                        ENGTH: 107
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APPLICATION NUMBER: US 60/074,788
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17; Conserv
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                                                                                                                                                                                                                                                                    Kovalic, David K. Screen, Steven E
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Pred. No. 5
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Pred. No. 58;
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Query Match
Best Local Similarity
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                                                                                                                                                                                                SOFTWARE: PatentIn Ver. SEQ ID NO 2376
                                                                                                                                                                                                                                                                                                                                                                                      Sequence 2376, Appin GENERAL INFORMATION:
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SEQ ID NO 56955
LENGTH: 107
TYPE: PRT
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Best Local Similarity
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Best Local Similarity
                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/10/264,237
CURRENT FILING DATE: 2002-10-04
PRIOR APPLICATION NUMBER: PCT/US01/16450
PRIOR FILING DATE: 2001-05-18
PRIOR APPLICATION NUMBER: US 60/205,515
                                                                                                                                                                                                                               PRIOR FILING DATE: 2000-05-19
NUMBER OF SEQ ID NOS: 2876
                                                                                                                                                                                                                                                                                                                                         APPLICANT: Birse et al. TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies FILE REFERENCE: PA131P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/10/425,114
CURRENT FILING DATE: 2003-04-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement FILE REFERENCE: 38-21(53313)B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
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                                                                                                                                                TYPE: PRT ORGANISM: Homo sapiens
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                                                                                        OTHER INFORMATION: Xaa equals any of the twenty naturally occurring L-amino acids
                                                                                                      NAME/KEY: MISC_FEATURE LOCATION: (90)
                                                                                                                                      FEATURE:
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OTHER INFORMATION: Clone ID:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Zea mays
                                                                                                                                                                                  ENGTH: 136
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INFORMATION:
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Screen, Steven E
Tabaska, Jack E
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              Conservative
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Steven E
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                            Score 57; DB
Pred. No. 59;
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Pred. No. 4:
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Pred. No. 43;
              Mismatches
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                                            DB 6;
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; Sequence 8227, Application US/10219051B
; GENERAL INFORMATION:
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CURRENT FILING DATE: 2002-12-18
PRIOR APPLICATION NUMBER: JP 2001/246789-
PRIOR FILING DATE: 2001-06-18
NUMBER OF SEQ ID NOS: 2430
SOFTWARE: PATENTIN Ver. 2.1
SEQ ID NO 2262
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Best Local
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APPLICANT: The General Hospital Corporation doing business APPLICANT: Hospital / Bayer AG
TITLE OF INVENTION: Nucleotide sequences involved in pain FILE REFERENCE: LeA 35693 Foreign Countries
CURRENT APPLICATION NUMBER: US/10/219,051B
CURRENT FILING DATE: 2003-05-09
PRIOR APPLICATION NUMBER: US 60/312,147
PRIOR APPLICATION NUMBER: US 60/346,382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: ASAI KIYOSHI
APPLICANT: AKIYAMA, YUTAKA
APPLICANT: ABURATANI, HIROYUKI
TITLE OF INVENTION: NOVEL G PROTEIN-COUPLED RECEPTORS
FILE REFERENCE: 084335/0152
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCATION: (8) OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION: Variable amino acid
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14; Conser
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ilarity 63.6%;
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Pred. No. 17;
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Pred. No.
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Mismatches
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PRIOR APPLICATION NUMBER: US 60/312,147
PRIOR FILING DATE: 2001-08-14
PRIOR FILING DATE: 2001-08-14
PRIOR FILING DATE: 2001-11-01
PRIOR FILING DATE: 2001-11-01
PRIOR FILING DATE: 2001-11-26
NUMBER OF SEQ ID NOS: 14715
SOFTWARE: Perl Script
SEQ ID NO 8229
FENOTH: 396
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US-10-366-683-16956
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LENGTH: 396
TYPE: PRT
                                                                                                                                                                                             Sequence 16956, Appl
GENERAL INFORMATION:
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PUBLICATION INFORMATION:
DATABASE ACCESSION NUMBER: SWISS-Prot / AAA68695
DATABASE ENTRY DATE: 1998-11-01
                                                                                                                  APPLICANT: Rubenfield, Marc J.
APPLICANT: Nolling, Jork
APPLICANT: Deloughery, Craig
APPLICANT: Bush, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Homo sapiens
PUBLICATION INFORMATION:
DATABASE ACCESSION NUMBER: Refseq / NP_056008
DATABASE ENTRY DATE: 2002-10-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE: LeA 35693 Foreign Countrie CURRENT APPLICATION NUMBER: US/10/219,0518 CURRENT FILING DATE: 2003-05-09
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PRIOR APPLICATION NUMBER: US 60/333,347
PRIOR FILING DATE: 2001-11-26
NUMBER OF SEQ ID NOS: 14715
                  FILE REFERENCE: PATH03-04
CURRENT APPLICATION NUMBER: US/10/366,683
CURRENT FILING DATE: 2003-02-13
                                                                      APPLICANT: Nolling, Jork
APPLICANT: Deloughery, Craig
APPLICANT: Bush, David
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: The General Hospital Corporation doing business as APPLICANT: Hospital / Bayer AG TITLE OF INVENTION: Nucleotide sequences involved in pain
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APPLICATION NUMBER: 09/252,991
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Similarity 47.8%;
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                                                                                                                                                                                                                Application US/10366683
                                                                                                                                                                                                                                                                                                                                                                                                                    47.7%;
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Pred. No.
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                                                                             SEQUENCES RELATING TO AND THERAPEUTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 396;
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Result
No.
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Maximum DB
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Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM protein -
                                                                                                                                                                                                                                                                                                                                                    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                  Score
                                                                                                          53.5
52.5
52.5
52.5
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57.5
57.5
57.5
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                                                                                                                                                                                                                                                                                                Match Length
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Pending_Patents_AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Maximum Match 100%
Listing first 45 s
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Copyright (c) 1993 - 2003
                                                                                                                                                                                                                                                                                                                                                                                             /cgn2_6/ptodata/1/paa/PCT_NEW_COMB.pep:*
/cgn2_6/ptodata/1/paa/US06_NEW_COMB.pep:*
/cgn2_6/ptodata/1/paa/US07_NEW_COMB.pep:*
/cgn2_6/ptodata/1/paa/US08_NEW_COMB.pep:*
/cgn2_6/ptodata/1/paa/US09_NEW_COMB.pep:*
/cgn2_6/ptodata/1/paa/US00_NEW_COMB.pep:*
/cgn2_6/ptodata/1/paa/US00_NEW_COMB.pep:*
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173.908 Million cell updates/sec
DB
                             US-10-425-114-66861
US-10-282-122A-49117
US-60-452-680-16830
US-10-366-683-20533
US-10-419-1128-20533
US-10-425-114-48236
US-10-425-114-53496
US-10-425-114-68542
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US-1
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US-10-425-114-58367
US-10-017-161-2262
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US-10-219-051B-8229
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                                                                                                                                                                                     -10-425-114-53360
-10-425-114-56955
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                                                                                                                                                                                             Sequence 70663,
Sequence 58367,
Sequence 2262, A,
Sequence 8227, A,
Sequence 8229, A,
Sequence 16956,
Sequence 16956,
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          Sequence
                                                                                             66861,
49117,
16830,
20533,
20533,
60359,
                                                                                                                                                            56955,
2376, p
                                                                      Sequence 70663, Application US/10425114
GENERAL INFORMATION:
APPLICANT: Liu, Jingdong
APPLICANT: Zhou, Yihua
APPLICANT: Zhou, Yihua
APPLICANT: Kovalic, David K.
APPLICANT: Screen, Steven E
APPLICANT: Tabaska, Jack E
APPLICANT: Tabaska, Jack E
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Moleculės and TITLE OF INVENTION: Plants and Uses Thereof
FILE REFERENCE: 38-21(53313)B
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US-10-425-114-70663
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CURRENT APPLICATION NUMBER: US/10/425,114
CURRENT FILING DATE: 2003-04-28

and Uses Thereof

and Other Molecules Associated With

| 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 |
|---------------------|---------------------|---------------------|---------------------|----------------------|---------------------|--------------------|------------------|---------------------|--------------------|---------------------|-------------------|-------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|
| 49.5 | 49.5 | 49.5 | 49.5 | 49.5 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50.5 | 50.5 | 50.5 | 50.5 | 51 | 51 |
| 38.1 | 38.1 | 38.1 | 38.1 | 38.1 | 38.5 | 38.5 | 38.5 | 38.5 | 38.5 | 38.5 | 38.5 | 38.5 | 38.8 | 38.8 | 38.8 | 38.8 | 39.2 | 39.2 |
| 200 | 200 | 76 | 76 | 76 | 692 | 473 | 334 | 288 | 166 | 150 | 106 | 28 | 585 | 549 | 91 | 77 | 957 | 570 |
| 6 | თ | σ | Ş | ب | თ | σ | 9 | σ | 9 | ຫ | σ | σ | σ | σ | Ø | σ | δ | δ |
| US-10-419-128-28054 | US-10-366-683-28054 | US-10-057-498-13379 | US-09-978-825-13379 | PCT-US02-32727-13379 | US-10-156-761-12598 | US-10-446-203-8988 | US-10-378-029-62 | US-10-369-493-17910 | US-10-417-886-7345 | US-09-675-784A-8983 | US-10-289-762-253 | US-09-874-644A-17 | US-10-438-246-17731 | US-10-438-246-17783 | US-10-424-599-265356 | US-10-424-599-179654 | US-10-282-122A-64361 | US-10-369-493-5081 |
| Sequence 28054 | Sequence 28054 | Sequence 13379 | Sequence 13379 | Sequence 13379 | Sequence 12598 | Sequence 8988, | Sequence 62, i | Sequence 17910 | Sequence 7345, | Sequence 8983 | Sequence 253 | Sequence 17, | Sequence 17731, | Sequence 177 | Sequence 265 | Sequence 179 | Sequence 64361 | Sequence 5081 |
| 54, A | 54, A | 79, A | 79, A | 79, A | 98, A | 8, Ap | 4 | 10, A | 5, Ap | 3. Ap | | | 31, A | 17783, A | 265356, | 179654, | 61, A | - |

ALIGNMENTS

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; FEATURE: ; OTHER INFORMATION: Clone ID: UC-ZMFLB73064A07_FLI.pep US-10-425-114-70663
                                                                                                                                                                                                                                                                                                 US-10-425-114-58367
Sequence 58367, Application US/10425114

GENERAL INFORMATION:
APPLICANT: Liu, Jingdong
APPLICANT: Zhou, Yihua
APPLICANT: Zhou, Yihua
APPLICANT: Kovalic, David K.
APPLICANT: Screen, Steven E
APPLICANT: Tabaska, Jack E
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILL REFERENCE: 38-21(5313)B
CURRENT APPLICATION NUMBER: US/10/425,114
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 73128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 17
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SEQ ID NO 70663
LENGTH: 245
TYPE: PRT
ORGANISM: Zea mays
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                                                                                                                                                                                                                                                                                                                                                                                                                       2 RWVRRVRRVWR-----RVVRVVRRWVRR
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Pred. No. 1
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RESULT 14
US-09-785-059-12
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US-09-785-058-12
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Best Local S
Matches 24
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 12
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Best Local Similarity 100.0%;
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SOFTWARE: FRStSEQ for Windows Version 3.0
SEQ ID NO 12
LENGTH: 48
                                                                                                                                                                                                                                                          Sequence 12, Application US/09785059 GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION: artificial peptides derived from HIV-1:-09-785-058-12
                                                          CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 12
SEQ ID NO 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396, 0222
CURRENT APPLICATION NUMBER: US/09/785, 058
CURRENT FILING DATE: 2001-02-16
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A34001-PCT / 072396.0223
CURRENT APPLICATION NUMBER: PCT/US02/04812
CURRENT FILING DATE: 2002-02-19
                                                                                                                                                                     APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A33577 / 072396.0217
                                                                                                                                                                                                                APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: artificial peptides derived from HIV-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
ORGANISM: Artifical sequence
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DRGANISM: Artifical sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ENGTH: 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
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Pred. No. 7.6e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 130; DB 21;
Pred. No. 7.6e-09;
; Mismatches 0;
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US-10-079-075-12; Sequence 12, Application US/10079075; GENERAL INFORMATION:
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Search completed: June Job time: 103.915 secs
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                                                                                                                                                                                                                          ; OTHER INFORMATION: artificial peptides derived from HIV-1 US-10-079-075-12
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 100.0%; Score 130; DB 21; Best Local Similarity 100.0%; Pred. No. 7.6e-09; Matches 24; Conservative 0; Mismatches 0;
                                                                                                                                                Matches
                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
                                                                                                                                                                                                                                                                                                  LENGTH: 48
TYPE: PRT
                                                                                                                                                                                                                                                               ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 RRWVRRVRRVWRRVVRRWVRR 24
                                                                                                             1 RRWVRRVRRVWRRVVRRWVRR 24
                                                                                                                                                                     Similarity
                                                                          RRWVRRVRRVWRRVVRVVRRWVRR 30
                                                                                                                                                Conservative
                   9, 2003, 12:25:29
                                                                                                                                                                   100.0%; Score 130; DB 24; 100.0%; Pred. No. 7.6e-09;
                                                                                                                                                  Mismatches
                                                                                                                                                                                       DB 24;
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PCT-US02-04812-11

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US-09-785-059-11
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CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 11
LENGTH: 36
                                                       NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 11
                                                                                                                                                                                                                           Sequence 11, Application US/09785059 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 11
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Best Local (
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
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APPLICANT: Timothy A. Mietzner
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
TITLE OF INVENTION: A 34001 / 072396.0222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILE REFERENCE: A 34001 / 072396.0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-PCT / 072396.0223
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ORGANISM: Artifical
FEATURE:
ORGANISM: Artifical sequence
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                                        ENGTH:
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Pred. No. !
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Pred. No. 5.8e-09;
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US-10-079-075-11
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SEQ ID NO 11
LENGTH: 36
TYPE: PRT
ORGANISM: Artificial Sequence
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GENERAL INFORMATION:
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Best Local (
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Best Local Similarity
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NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
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CURRENT APPLICATION NUMBER: PCT/US02/04432
                                                                                                                                                                                                                                                                                                                              APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
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                                                                                                                                                                                                 LENGTH: 48
TYPE: PRT
                                                                                                                                                 OTHER INFORMATION: artificial peptides derived from HIV-1
                                                                                                                                                                                ORGANISM: Artificial Sequence
                                                                                                                                                                  FEATURE:
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pred. No. 5.8e-09;
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Pred. No. 7.6e-09;
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RESULT 12 PCT-US02-04812-12

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...rucant: Timothy A. Mietzner

TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PER
FILE REFERNCE: A33577 / 072396.0217

CURRENT APPLICATION NUMBER: US/09/785,059

CURRENT FILING DATE: 2001-02-16

NUMBER OF SEQ ID NOS: 12

SOPTWARE: FastSEQ for Windows Varri
SEQ ID NO 10

LENGTH: 7.
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 10
LENGTH: 24
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CURRENT APPLICATION NUMBER: PCT/US02/04812
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 10
LENGTH: 24
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Best Local Similarity
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Best Local
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CURRENT FILING DATE: 2001-02-16
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
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Pred. No. 3.9e-09;
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Pred. No. 3.9e-09;
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Matches
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SEQ ID NO 10
LENGTH: 24
TYPE: PRT
ORGANISM: Artificial Sequence
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LENGTH: 36
                                                           Matches
                                                                                       Query Match
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-PCT / 072396.0223
CURRENT APPLICATION NUMBER: PCT/US02/04432
CURRENT FILING DATE: 2002-02-13
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APPLICANT: Timothy VIRUS DERIVED ANTIMICROBIAL
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
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SOFTWARE: FastSEQ for Windows Version 3.0
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NUMBER OF SEQ ID NOS:
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                                                                                                                                                                                     TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: Artificial peptide derived from HIV-1
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                                                                                                                                    OTHER INFORMATION: Artificial peptide derived
                                                                                                                                                      FEATURE:
                                                                                                                                                                   ORGANISM: Artificial
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                             1 RRWVRRVRRVWRRVVRRWVRR 24
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                                                           Conservative
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Pred. No. 3.9e-09;
Pred-matches 0;
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Pred. No. 3.9e-09
                                                                          Score 130; DB 1;
Pred. No. 5.8e-09;
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                                                           Mismatches
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RESULT 7

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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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Perfect score:
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12_6/ptodata/1/paa/US085_COMB.pep: *
12_6/ptodata/1/paa/US085_COMB.pep: *
12_6/ptodata/1/paa/US085_COMB.pep: *
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112_6/ptodata/1/paa/US089_COMB.pep: *
112_6/ptodata/1/paa/US089_COMB.pep: *
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148.906 Million cell updates/sec
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PCT-US02-04432-10
PCT-US02-04812-10
1 US-09-785-058-10
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 Sequence 11,
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| - | 100 | 4 6 | 122 | 133 | 133 | 31 | 31 | 31 | 31 | 31 | 48 | 48 | 48 | 48 | 48 | 42 | 42 | 42 | 42 | 42 | 36 | 36 | 36 | 36 | 36 | 24 | 24 | 24 | 24 | 24 | 4. | 48 | 48 | 48 | 48 | 36 | 36 | 36 | 36 |
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| ECT-0002-04432-7 | 11002 04433 9 | CH-11001-00666- | -60-191-681-845 | -60-191-637 | -09-614-150-107 | -10-079-075- | US-09-785-059-3 | | -US02-04812- | 02-04432- | US-10-079-075-8 | US-09-785-059-8 | | -US02-04812 | | -10-079-075- | . US-09-785-05 9-7 | US-09-785-058-7 | -US02-04812- | PCT-US02-04432-7 | -10-079-075- | -09-785-059- | -09-785-058- | | | US-10-079-075-5 | -09-785-059- | -09-785-058- | -US02-04812- | -US02-04432-5 | -10-079-075- | -09-785-059-1 | -09-785-058-1 | -US02-04812-1 | -US02-04432-1 | -10-079-075-1 | -09-785-059-1 | -09-785-05 | PCT-US02-04812-11 |
| . educates 2, | ٠. | emence of | 2450 | equence 10778. | 107 | ω - | ω • | e ω | 3, 2 | ω | æ | 8, Appl | e 8 | 8, Appl | 8 | 7 | 7, Appl | e 7, | 7, Appli | 7, | è | - | о О | 9 | ς, | 5, Appl | equence 5, | e 5, Āppl | <u></u> ა | 5, Appli | æ | e 12, App | OD. | equence 12, | 12, / | Sequence 11, Appl | e 11, | ce 11, Āp | Sequence 11, Appl |

ALIGNMENTS

PCT-US02-04432-10

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Sequence 10, Application PC/TUS0204432

GENERAL INFORMATION:
APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
ITILE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-PCT / 072396.0223
CURRENT APPLICATION NUMBER: PCT/US02/04432
CURRENT FILING DATE: 2007-02-13
NUMBER OF SEQ ID NOS: 12
SOPTWARE: FastSEQ for Windows Version 3.0
LENGTH: 24
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                                Ś
                                                                                                                                                       PCT-US02-04432-10
                                                                          Query Match
Best Local S
Matches 24
                                                                                                                                                                                         TYPE: PRT
ORGANISM: Artificial Sequence
PEATURE:
                                                                                                                                                                       OTHER INFORMATION: Artificial peptide derived from HIV-1
                                                                            24;
1 RRWVRRVRRVWRRVVRRWVRR 24
                                                                                            Similarity
                  RRWVRRVRRVWRRVVRVVRRWVRR 24
                                                                          100.0%; Score 130; DB 1; ilarity 100.0%; Pred. No. 3.9e-09; Conservative 0; Mismatches 0;
                                                                                                             Length 24;
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US-09-785-059-6
                                                                                                                                                                                                                                                                                      RESULT 14
US-10-079-075-6
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; OTHER INFORMATION: Artificial peptide derived from HIV-1
US-09-785-058-5
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US-09-785-059-6
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Patent No. US20020169279A1
GENERAL INFORMATION:
APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
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SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 5
LENGTH: 24
TYPE: PRT
                                 APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19

NUMBER OF SEQ ID NOS: 12
SOFTMARE: FastSEQ for Windows Version 3.0
SEQ ID NO 6
SEQ ID NO 6
SECURENCE: 36
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 6
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                                                                                                                                                                                                                                             Sequence 6, Application US/10079075
Publication No. US20020188102A1
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
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APPLICANT: Timochy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396,0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                           APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT ORGANISM: Artifical sequence FEATURE:
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                     TYPE: PRT
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RGANISM: Artificial Sequence
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Pred. No. 5
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Pred. No. 8.1e-05;
0; Mismatches 3;
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Search completed: June Job time : 13.766 secs
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US-09-785-058-6
                                                                                                                                                                                     US-09-785-058-6
                                                                                                                                                                                             SEQ ID NO 6
LENGTH: 36
TYPE: PRT
ORGANISM: Artifical sequence
FEATURE:
OTHER INFORMATION: Artificial peptide derived from HIV-1
                                                                                                                       Query Match
Best Local Similarity
Matches 21; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 6, Application US/09785058 Publication No. US20030036627A1 GENERAL INFORMATION:
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Best Local 9
                                                                                                                                                                                                                                                                                           CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
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                                                                                                                                       67.7%;
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Pred. No. 8.1e
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Pred. No.
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                                                                                                                                          8.1e-05
                                                                                                                                                       DB 9;
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FILE REFERENCE: A33577 / 072396.0217
CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16

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; OTHER INFORMATION: artificial peptides derived from HIV-1 US-09-785-058-12
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US-10-079-075-12
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US-09-785-059-12
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Best Local S
Matches 24
                                                                                          SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 12
LENGTH: 48
                                                                                                                                                                                                                                                                                     Sequence 12, Application US/09785058 Publication No. US20030036627A1 GENERAL INFORMATION:
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Best Local Similarity
Matches 24; Conserv
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 12
LENGTH: 48
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SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 12
                                                                                                                                                                   APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
                                                                                                                                                   NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT ORGANISM: Artificial Sequence
                                       ORGANISM: Artifical sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: PRT
ORGANISM: Artifical
FEATURE:
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100.0%; Pred. No. 6.5e-10;
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Pred. No. 6.5e-10;
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RESULT 12 US-09-785-058-5

Sequence 5, Application US/09785058 Publication No. US20030036627A1

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                                                                                                                   ; OTHER INFORMATION: Artificial peptide derived from HIV-1 US-10-079-075-5
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                                                                                                                                                                                         APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
RUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 5
LENGTH: 24
                                                                                                                                                                                                                                                                                                                                            Sequence 5, Application US/10079075 Publication No. US20020188102A1 GENERAL INFORMATION:
                                                                                     Query Match
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LENGTH: 24
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Patent No. US20020169279A1
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Best Local Similarity
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CURRENT FILING DATE: 2001-02-16
NUMBER OF GEO.
                                                                                                                                                                                                                                                                                                                APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne:
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                            TYPE: PRT
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ORGANISM: Artifical sequence
                                                                                                                                                FEATURE:
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OTHER INFORMATION: Artificial
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87.5%;
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87.5%;
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Pred. No.
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                                                                      ; OTHER INFORMATION: Artificial US-09-785-059-11
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Query Match
Best Local Similarity
Matches 24; Conser
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LENGTH: 24
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                                                                                                                                                                                                                                                                                                                                                         Patent No. US20020169279A1
                                                                                                                                                                                                                            FILE REFERENCE: A33577 / 072396.0217
CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A 34001 / 072396.0222
                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                 APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
                                                                                                                                                                                                                                                                                                      APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne
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SOFTWARE: FastSEQ for Windows Version 3.0
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CURRENT FILING DATE: 2001-02-16
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                                                                                                       LENGTH: 36
TYPE: PRT
ORGANISM: Artifical sequence
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ORGANISM: Artificial Sequence
FEATURE:
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 Conservative
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                100.0%; Score 130; 100.0%; Pred. No. '
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                                                                                     peptide derived from HIV-1
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Pred. No. 3.3e-10;
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 Mismatches
                4.9e-10;
                                   DB 9;
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APPLICANT: Timothy A. Mietzner
ITITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
INUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 11
LENGTH: 36
ITYPE: PRT
ORGANISM: Artifical sequence
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; OTHER INFORMATION:
US-09-785-058-11
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                                                                                                         US-09-785-059-12
                                                                                                                       RESULT 7
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SEQ ID NO 11
LENGTH: 36
TYPE: PRT
ORGANISM: Artificial Sequence
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                                                   GENERAL INFORMATION:
                                                                    Sequence 12, Application UP Patent No. US20020169279A1
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Best Local (
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
RUMBER OF SEQ ID NOS: 12
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
                  APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne
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ALIGNMENTS

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US-10-079-075-10
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US-09-785-059-10
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CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FASESEQ for Windows Version 3.0
SEQ ID NO 10
LENGTH: 24
                                                                                                                                    Sequence 10, Application US/10079075 Publication No. US20020188102A1 GENERAL INFORMATION:
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Matches
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APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
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RESULT 14
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25-JUL-1997;
09-OCT-1997;
The present invention describes a gene which is contained in a non-B non-C non-G hepatitis DNA virus. It is 3500-4000 bases in length and contains two overlapping open reading frames (ORF). It is obtained by polymerase chain reaction (PCR) amplification using primer. The present sequence represents a specifically claimed non-B non-C non-G hepatitis protein sequence. The gene can be used for the production of vaccines for prevention and treatment of non-B non-C non-G hepatitis infection. Diagnosis of such infection, and screening of blood (e.g. intended for transfusion) for the presence of the virus, by using the virion or antigenic peptides as reagents for detection of antibodies to the virus, or by direct detection of the gene using PCR with primers derived from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention relates to novel peptides containing a sequence of 18 amino acids with either a hydrophobic surface of 5-7 amino acids and 80% hydrophobic amino acids or a hydrophilic surface of 5-6 amino acids, 80% hydrophilic amino acids, and 50% Arg and/or Lys, and a second hydrophobic surface of 2-4 hydrophobic amino acids or a second hydrophobic surface of 3-5 hydrophilic amino acids and 80% hydrophilic amino acids. The peptides of the invention are used for the effective introduction of a desired gene in gene therapy, especially for treatment and prevention of graft-versus-host-disease (GVHD) and restenosis
                                                                                                                                                                                                                                                                         Gene isolated from non-B non-C non-G hepatitis DNA virus - and its expression products, useful for diagnosis and treatment of hepatitis and screening of blood for transfusion.
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Pred. No. 2.
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2.6;
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RESULT 15
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                                                                                           peptide fragments of the virus. The invention also relates to the use of TT virus peptides for anti-TT virus antibodies and the serum type classification method, can be used to screen TT virus, to determine its route of infection, and seroconversion. The classification of TT virus may lead to improved treatment of viral disease. The present sequence represents a fragment of TT virus protein used in the course of the invention.
                                                                               Sequence
                                                                                                                                                                         A method for serum type classification of TT virus (also knepatitis TT virus) has been identified. The method relies
                                                                                                                                                                                                                          Peptides for determination of anti-TT virus antibody and method serum classification of TT virus using the peptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the
                                                                                                                                                                                                      Claim 1; Page 6-7; 12pp; Japanese.
                                                                                                                                                                                                                                                         WPI; 2000-415430/36.
                                                                                                                                                                                                                                                                                                  29-OCT-1998;
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                                                                                                                                                                                                                                                                                                                                                               JP2000135087-A.
                                                                                                                                                                                                                                                                                                                                                                                                                Serum
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAB03839 standard;
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                                                                                                                                                                                                                                                                                                                                                                                   TT virus
                                                                                                                                                                                                                                                                                                                                                                                                    identify;
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11
                                                                                                                                                                                                                                                                                                                                                                                                               type classification;
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                   1 RRWVRRVRRVWRRVVRVVRR
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                                                                                                                                                                                                                                                                                                                                                                                                       treatment
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                                                 41.5%;
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                                      Score 54; DB Pred. No. 10; 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                antibody; viral
                                                                                                                                                                                                                                                                                                                                                                                                                                   antibody determination.
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RESULT 12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present sequence represents a protein of Sentinel virus I (SVI) SVI polymucleotides are useful for detecting SVI virus. Probes and primers derived from SVI polymucleotide sequences are useful for identifying and isolating new variants of SVI. SVI polymucleotides at useful for detecting SVI virus, producing SVI polypeptides, construct SVI-based expression/transduction vectors and as antisense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               oligonucleotides or for construction of antisense SVI vectors. Antisense SVI polynucleotides block expression of SVI proteins and/or SVI viral replication in SVI infected cells, and thus are useful for treating SVI infections. SVI polypeptides are useful in vaccines for preventing SVI
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                                                            14-JUN-2001.
                                                                                                                                                                              Sentinel virus
                                                                                                                                                                                                                                 SVI; viral replication; viral infection; vaccine
                                                                                                                                                                                                                                                                                                                                                   22-AUG-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Amino acid sequence of a Sentinel virus I (SVI) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22-AUG-2001
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   08-DEC-2000; 2000WO-IB02011.
                                                                                                                     WO200142299-A2.
                                                                                                                                                                                                                                                                                       Amino acid sequence of a Sentinel virus I (SVI) protein
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard; Protein; 635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RRWVRRVRRVWRRVVRVV------RRWVRR 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RRW-RRLR--WRRPRRAVRRRRRGRRVRRRRWARR 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and for treating SVI infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              635 AA;
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                                                                                                                                                                                                                                                                                                                                                (first entry)
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Pred. No. 29;
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Matches 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present sequence represents a protein of Sentinel virus I (SVI). SVI polynucleotides are useful for detecting SVI virus. Probes and primers derived from SVI polynucleotide sequences are useful for identifying and isolating new variants of SVI. SVI polynucleotides are useful for detecting SVI virus, producing SVI polypeptides, constructing SVI-based expression/transduction vectors and as antisense
                       New peptides that bind to a gene and improve the transfer of into cells for use in a high efficiency gene therapy vector, treating and preventing of graft-versus-host-disease and rest
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SVI polynucleotides block expression of SVI proteins and/or SVI viral replication in SVI infected cells, and thus are useful for treating S infections. SVI polypeptides are useful in vaccines for preventing SV infection and for treating SVI infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel virus, designated sentinel virus I, associated with cryptogenic, nonA-G hepatitis, and polynyclectides and polypeptides of virus useful
                                                                                                                                                                                      28-SEP-2001; 2001WO-JP08565
                                                                                                                                                                                                                                                                     Synthetic.
                                                                                                                                                                                                                                                                                              peptide therapy.
                                                                                                                                                                                                                                                                                                              arteriosclerosis;
                                                                                                                                                                                                                                                                                                                           Phosphatidylserine;
                                                                                                                                                                                                                                                                                                                                                    Phosphatidylserine affinity synthetic peptide
                                                                                                                                                                                                                                                                                                                                                                                15-JUL-2002
                                                                                                                                                                                                                                                                                                                                                                                                         AAU79973;
                                                                                                                                                                                                                                                                                                                                                                                                                                 AAU79973 standard; Peptide; 37 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            oligonucleotides or for construction of antisense SVI vectors.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2001-381643/40
                                                                                WPI; 2002-362674/39
                                                                                                        Kuriyama S,
                                                                                                                                                            12-OCT-2000; 2000JP-0312600.
                                                                                                                                                                                                                18-APR-2002.
                                                                                                                                                                                                                                            WO200230961-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               for detecting SVI virus and/or SVI virus infection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Liu J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-DEC-1999;
                                                                                                                                  (MOCH ) MOCHIDA PHARM CO LTD
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                                                                                                                                                                                                                                                                                                           e; graft-versus-host-disease; GVHD; immunosuppressive; vasotropic; gen
                                                                                                                                                                                                                                                                                                                                                                                entry)
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Claim 7; Page 136; 146pp; Japanese.

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Matches 9
                                           capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and control cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA sequences (ABL01840-ABL16175) and the encoded proteins
                                                                                                                                                                                                                                                                              WPI; 2001-656860/75.
N-PSDB; ABL12383.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating disorders involving aberrant protein expression or biological activity. The polypeptide and polymucleotide sequences have applications in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits to assess biodiversity and to produce other types of data and products dependent on DNA and amino acid sequences. ABG00010-ABG30377 represent novel human diagnostic amino acid sequences of the invention.

Note: The sequence data for this patent did not appear in the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                            New isolated nucleic
                                                                                                                                                                            Disclosure; SEQ ID NO 31632; 21pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                             23-MAR-2000; 2000US-191637P.
11-JUL-2000; 2000US-0614150.
                                sequences (ABL0184)
(ABB57737-ABB72072)
                                                                                                                                             The invention relates to an isolated nucleic acid detection reagent
                                                                                                                                                                                                                                                                                                                             Venter
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Drosophila melanogaster polypeptide SEQ ID NO 31632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABB68280;
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                                                                                                                                                                                                              interactions
                                                                                                                                                                                                                                                                                                                                                             (PEKE ) PE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200171042-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pharmaceutical.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Drosophila; developmental biology; cell signalling; insecticide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26-MAR-2002
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                                                                                                                                                                                                                 from Drosophila
actions -
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                                                                                                                                                                                                                                                                                                                           PWD,
                                                                                                                                                                                                                           detection reagent for detecting 1000 or more for elucidating cell signalling and cell-cell
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Pred. No.
                                                                                                                                                                                                                                                                                                                           Myers
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22;
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The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from

WIPO

RESULT 11 AAB84456 ID AAB84

AAB84456 standard; Protein; 635

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18

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RESULT 10
AAB84458
ID AAB84
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Best Local S
Matches 16
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Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                        The present sequence represents a protein of Sentinel virus I (SVI). SVI polynucleotides are useful for detecting SVI virus. Probes and primers derived from SVI polynucleotide sequences are useful for identifying and isolating new variants of SVI. SVI polynucleotides are useful for detecting SVI virus, producing SVI polypeptides, constructing SVI-based expression/transduction vectors and as antisense oligonucleotides or for construction of antisense SVI vectors. Antisense SVI polynucleotides block expression of SVI proteins and/or SVI viral replication in SVI infected cells, and thus are useful for treating SVI infections. SVI polypeptides are useful in vaccines for preventing SVI infections. SVI polypeptides are useful in vaccines for preventing SVI
                                                                                                                                                                                                                                                                                                                    Novel virus, designated sentinel virus I, associated with nonA-G hepatitis, and polynucleotides and polypeptides of for detecting SVI virus and/or SVI virus infection -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               at
                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SVI; viral replication;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB84458 standard; Protein; 634
                                                                                                                                                                                                                                                                                            Example 1;
                                                                                                                                                                                                                                                                                                                                                                         WPI; 2001-381643/40.
                                                                                                                                                                                                                                                                                                                                                                                                   Liu J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-DEC-2000; 2000WO-IB02011.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         14-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200142299-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sentinel virus I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Amino acid sequence of a Sentinel virus I (SVI) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB84458;
                                                                                                                              infection and for treating SVI infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      10-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                             (HOFF ) ROCHE DIAGNOSTICS GMBH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               381 RWYQRSRFIRIWNQILALVRDRPQVVRGRWYRR 413
20
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                                                    16;
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                                                               Similarity
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                        RRWVRRVRRVWRRVVRVV------RRWVRR 24
                                                                                                                                                                                                                                                                                           Page 62-64; 65pp;
                                                                                                        634 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     681 AA;
                                                    Conservative
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 WRRPRRAVRRRRRGRRVRRRRWARR
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                                                                                                                                                                                                                                                                                                                                                                                                  Lin Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        viral infection;
                                                               Score 56;
Pred. No.
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Pred. No.
                                                                                                                                                                                                                                                                                           English.
                                                                                                                                                                                                                                                                                                                                                                                                   Chen BP;
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                                                    Mismatches
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23;
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51
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                                                                           Length 634;
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                                                    Indels
                                                                                                                                                                                                                                                                                                                                   cryptogenic,
virus useful
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RESULT 7
AAB75222
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (b) inmune disorders e.g. Addison's disease, allergies, autoimmune haemolytic anaemia, autoimmune thyroiditis, diabetes mellitus, Crohn's disease, multiple sclerosis, rheumatoid arthritis and ulcerative colitis; (c) cardiovascular disorders such as myocardial ischamias; (d) wound healing; (e) neurological diseases e.g. cerebral anoxia and epilepsy; and (f) infectious diseases such as viral, bacterial, fungal
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                                      N-PSDB; AAF63761.
                                                                               WPI; 2001-061873/07
                                                                                                                                Carlson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gustatory receptor; fruit fly;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Drosophila gustatory receptor GR59D.2
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  New isolated nucleic
                                                                                                                                                                                                                                         14-JUN-1999;
10-FEB-2000;
                                                                                                                                                                                                                                                                                                                   14-JUN-2000; 2000WO-US16211
                                                                                                                                                                                                                                                                                                                                                                                                                           WO200077208-A2
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les 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 parasitic infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nucleic acids,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 : Ine sequence data for this patent did not form part of ted specification, but was obtained in electronic format WIPO at ftp.wipo.int/pub/pub/sepad ---
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   136 AA;
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                                                                                                                                   Clyne PJ,
                                                                                                                                                                                                                                      99US-0138668.
2000US-0181704.
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                                                                                                                                                                                       YALE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pest control
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acid molecule encoding Drosophila Gustatory
                                                                                                                                      Warr
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Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      taste; pheromone;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            semiochemical;
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                                                                                                                                       New isolated polynucleotide and encoded polypeptides, diagnostics, forensics, gene mapping, identification responsible for genetic disorders or other traits and biodiversity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Receptor protein useful for e.g. identification of compounds which may be used for pest management - \!\!\!\!\!
                                      The invention relates to isolated polynucleotide (I) and polypeptide (II) sequences. (I) is useful as hybridisation pr polymerase chain reaction (PCR) primers, oligomers, and for c polymerase chain reaction (PCR) primers, oligomers, and for c and gene mapping, and in recombinant production of (II). The
                                                                                                                                                                                                                                                                                                                   31-MAR-2000; 2000US-0540217.
23-AUG-2000; 2000US-0649167.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 food
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel human diagnostic protein #22542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABG22551;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABG22551 standard;
                                                                                                             Claim 20; SEQ ID No 52910; 103pp; English
                                                                                                                                                                                                                              WPI; 2001-639362/73
                                                                                                                                                                                                                                                           Drmanac RT,
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                                                                                                                                                                                                                                                                                                                                                                                                                       WO200175067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   damage crops or transmit diseases.
                                                                                                                                                                                                                                                                                        (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              n; chromosome mapping; gene mapping; gene therapy;
supplement; medical imaging; diagnostic; genetic c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97 RWYQRSRFIRIWNQILALVRDRPQVVRGRWYRR 129
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                                                                    as hybridisation probes,
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and gene mapping, and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving

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Birse
                                                                                                                                                                                                                                              Cytostatic; immunosuppressive; nootropic; neuroprotective; antiviral; antiallergic; hepatotropic; antidiabetic; antiinflammatory; antiulcer; vulnerary; anticonvulsant; antibacterial; antifungal; antiparasitic; cardiant; gene therapy; cancer; immune disorder; cardiovascular disorder; neurological disease; infection; human; secreted protein.
                                                                                                                                             29-NOV-2001.
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                                                                     19-MAY-2000; 2000US-205515P.
                                                                                                        18-MAY-2001;
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                                                                                                                                                                                                               Homo sapiens.
                                    (HUMA-) HUMAN GENOME SCI INC
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                                                                                                                                                                                                                                                                                                                                                        polypeptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 standard;
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9908-0157865

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S-0159584

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99US-014926.
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20-SEP-1999;
22-SEP-1999;
23-SEP-1999;
                                                                                                            Protein identification; signal transduction pathway; metabolic pathway; hybridisation assay; genetic mapping; gene expression control; promoter; termination sequence.
                                                                                   Arabidopsis thaliana.
              25-FEB-2000; 2000EP-0301439
                                       06-SEP-2000.
                                                              EP1033405-A2
                                                                                                                                                              Arabidopsis
                                                                                                                                                                                      18-OCT-2000
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                                                                                                                                                                                                                                      AAG50720 standard; Protein; 95
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Pred. No. 2.7;
2; Mismatches
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| • | 29-J | 24-ü | 23-0 | 22- | 21-0 | 18-3 | 18-0 | 18- | 18- | 1 6 | 18- | 18- | 18 - | 17- | 16- | 16- | 10- | 10- | 0 0 | 04- | 03- | 01 | 200 | 25- | 24-1 | 21-7 | 70-1 | 18- | 14-1 | 14-MA | 14-1 | | | 0 0 | 05-7 | 04-1 | 30-APR | 28-A | 23-APR | 21 - APR | 19-APR | 16-APR | 06-2 | 01-APR | 25-MAR | w | 9-1 | 25-1 | | о л | 06-8 | EP1 | |
| | JUN-1 | JUN-19 JUN-19 | -JUN-19 | ₫N-1 | 18-JUN-1999; 21-JUN-1999; | ₫N-1 | | GN-1 | Z : | 18-JUN-1999; | Z-1 | 3-JUN-1999 | | 7-JUN-1999, | JUN-1 | | -1 -1 | 10-JUN-1999; | |] <u>-</u> 1 | JUN-1 | 7N-1 | 9-MAY-1 | AY-1 | 24-MAY-1 | 1-MAY-1 | 0-MAY-1 | L8-MAY-1 | 4-MAY-1 | | 4-MAY-1 | | | 6-MAY-1 | 5-MAY-1 | 4-MAY-1 | ሟጟ | 12 | PR-1 | PR-1 | PR-1 | -APR-1 | -APR-1 | PR-1 | 5-MAR-1 9-MAR-1 | 3-MAR-1 | -MAR-1 | FEB-1 | | | -SEP-2 | EP1033405-A2 | |
| | 99 | 999; | 999; | 999; | 999; | 999; | 999; | 999; | 999; | , 666 | 999; | 999; | 999; | 999; | 999; | 999: | 999; | 999; | 999, | 999; | 999; | 999; | 1999. | 999; | 999; | 999; | 9999 | 999; | 999; | 999; | 999; | 999; | 999; | , 666 | 999; | 999; | 999; | 999; | 999; | 999; | 999; | 999: | 1999; | 999; | , 666 | 999; | 999; | 999; | , | 3000. | 2000. | 5-A2 | |
| | 991 | 991 | 166 166 | 991 | 991 | 991 | 991 | 991 | 99 | 99 | 99 | 991 | 9 9 | 991 | 991 | 9 9 | 991 | 991 | 9 4 | 99 | 991 | 99 | 9 9 | 99 | 991 | 99 | و د د | 99 | 991 | 99 | 99 | 99 | 99 | 9 4 | 99 | 991 | 9 9 | 99 | 991 | 999 | 99 | 9 4 | 9 9 | 9 1 | 9 9 | 99 | 9 9 | 99 | 2000 | 3000 | | • | |
| | 99US-0140991. 99US-0141287. | US-01 US-01 | US-01 US-01 | US-01 | US-01 | US-01 | US-01 US-01 | US-01 | US-01 | 18-01 18-01 | US-01 | US-01 | US-01 | 10-SI | US-01 | US-01 | US-01 | 9908-0138 | 05-01 | 5 S-01 | US-01 | US-01 | 18-01 | US-01 | US-01 | US-01 | - 01 - 01 | US-01 | US-01 | US-01 | US-01 | US-01 | US-01 | 10 - 01 10 - 01 | US-01 | TO-SD | US-01 | US-01 | US-01 | US-01 | US-01 | 5 | 9US-01 | ۵, | US-01 | <u>.</u> | 9US-01 | | 50.00 | 200088-0301439 | | | • |
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| | 01537 | 01523 | 01514 | 01513 | 01510 | 01510 | 01505 | 01499 | 01499 | 01497 | 01497 | 01494 | 0149: | 01486 | 01485 | 01483 | 01481 | 01479 | 01474 | 01473 | 01472 | 01471 | 01472 | 01470 | 01463 | 01463 | 0145 | 01459 | 01459 | 0145 | 0145 | 01452 | 0145 | 01450 | 01450 | 01450 | 01450 | 01448 | 01440 | 0144 | 01443 | 0144 | 0144 | 0144 | 0144 | 0144 | 0143 | 0143 | 0142 | 0142 | 0142 | 0142 | 01418 |
| | 758. | 63. | ລົລີ8. | 03. | 86. | 65. | 9 6 | 30. | 02. | 723 | 722. | 26 | 75. | 84. | 65 | 319. | 71. | 35. | 116. | ; Š | 60. | 92 | 204 | 38. | 389. | 88. | 951. |) 19. | 318. |)13 | 224. | 218. | 45 | 089. | 387. |)85. | 086 | 314. | 384 | 352. | 335. | 326 | 332. | 331. | 086. |)85. | 005 | 542 | 977. | 803. | 390. | 154. | 342. |
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RESULT 2
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                                                                  A method for serum type classification of TT virus (also known as hepatitis TT virus) has been identified. The method relies on the use of peptide fragments of the virus. The invention also relates to the use of TT virus peptides for anti-TT virus antibody determination. The anti-TT virus antibody determination, The used to screen TT virus, to determine its route of infection, and seroconversion. The classification of TT virus may lead to improved treatment of viral disease. The present sequence represents a fragment of TT virus protein used in the course of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA sequences (ABL01840-ABL16175) and the encoded proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to an isolated nucleic acid detection reagent capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of
                                                                                                                                                                                                                                    Peptides for determination of anti-TT virus antibody and method serum classification of TT virus using the peptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Serum type classification; identify; treatment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Protein fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from
                                           Sequence
                                                                                                                                                                                                          Claim 1; Page 7; 12pp; Japanese.
                                                                                                                                                                                                                                                                                WPI; 2000-415430/36
                                                                                                                                                                                                                                                                                                                                    29-OCT-1998;
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1.9;
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N-PSDB;
                                                                                                                                                                                                                                                                                               The invention relates to an isolated nucleic acid, comprising a 3899 (S1=ABA05995) or 3322 (S2=ABA05995) nucleotide sequence fully defined in the specification useful for diagnosis of non-A, non-B, non-C hepatitis. The present sequence is that of a TTV polypeptide, useful to the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-MAY-2000;
08-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Simian TT virus.
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                                                                                                                               AAG28909 standard;
                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page 20-22; 37pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                       DNA and
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2000JP-0340614.
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Protein identification; signal transduction pathway; metabolic hybridisation assay; genetic mapping; gene expression control;

pathway; promoter;

protein fragment SEQ ID NO: 34302

termination

Arabidopsis thaliana.

Arabidopsis thaliana

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Database
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Listing first 45 summaries
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New isolated nucleic acid detection reagent for detecting 1000 or more genes from Drosophila and for elucidating cell signalling and cell-cell

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| | Myers EW; | • | | | | | | biology; cell signalling; | polypeptide SEQ ID NO 1074 | | | .33 AA. | ALIGNMENTS | ABG17909 AAU52184 | ABG20900 | AAY34835 | AAP91336 | ABG40853 | AAM18821 | AAM58559 AAM71060 | ABB23182 | AAW31853 ABB37927 | AAB11546 | AAB76634 | AAG92249 | AAB37535 | AAY97179 | AAM47795 | AAG65539 | AAB84455 | AAM47989 | AAB11535 AAG45794 | AAB03839 | AAU79973 AAW99084 | AAB84457 | 77004456 |
| | | | | | | | | ng; insecticide; | 746. | | ν. | | | humi | Novel human diagno | Chlamydia pneumoni | Amino acid sequenc | Human peptide enco | Peptide #5255 enco | Human braın expres Human bone marrow | Protein #5181 enco | Mycobacterium tube Peptide #5433 enco | SEN virus protein | Corynebacterium gl | C glutamicum prote | TT virus ORF1 prot | Non-B, non-C, non- TT virus (TTV-GH1) | TT virus clone X94 | Peptide sequence u | Amino acid sequenc | Simian TTV CH71 SE | lopsi | Protein fragment # | Phosphatidylserine | Amino acid sequenc | Amino acid sequenc |

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STRAIN=TLMV-CLC062;
Mishiro S., Hijikata I
Submitted (FEB-2000)
 Q9JG47
Q9JG47;
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SEQUENCE FROM N.A.
MEDLINE=21844401; PubMed=11855633;
MEDLINE=21844401; PubMed=11855633;
                                                                                                                                   InterPro; IPR001064; Crystallin.
InterPro; IPR004219; TTvirus Unk.
Pfam; PF02956; TT_ORF1; 1.
PROSITE; PS00225; CRYSTALLIN BETAGAMMA; UNKNOWN
SEQUENCE 683 AA; 80452 MW; 10810FC3008A97C6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Analysis of the complete genomes classifiable into the fourth and f viremic infants.";
Arch. Virol. 147:21-41(2002).
                                                                                                                                                                                MEDLINE=20428649; PubMed=10971131;
Takahashi K., Hijikata M., Samokhvalov E.I., Mishiro S.;
Takahashi K. Hijikata M., Samokhvalov E.I., Mishiro S.;
"Full or near full length nucleotide sequences of TT virus variants (types SANBAN and YONBAN) and the TT virus-like mini virus.";
Intervirology 43:119-123(2000).
EMBL; AB038625; BAA93595.1; -...
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TT virus.
Viruses; ssDNA viruses;
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Takahashi K., Hijikata M., Samokhvalov E.I., Mishiro S.;
Takahashi K., Hijikata M., Samokhvalov E.I., Mishiro S.;
"Full or near full length nucleotide sequences of TT virus
(types SAMBAN and YONBAN) and the TT virus-like mini virus.
Intervirology 43:119-123(2000).

EMBL; AB038631; BAA93612.1; -
InterPro; IPR004216; Crystallin.
InterPro; IPR004219; TTVIUS_UNK.
Pfam; PF02956; TT ORF1; 1.

PROSITE; PS00225; CRYSTALLIN_BETAGAMMA; UNKNOWN_1.
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Mishiro S., Hijikata
Submitted (FEB-2000)
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TTV-like mini virus
Viruses; ssDNA virus
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MEDLINE=20428649; PubMed=10
Takahashi K., Hijikata M.,
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                                                                                                                                                                           M55524; AAA25957.1;
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virus variants
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Q9DUB7;
01-MAR-2001
01-MAR-2001
01-JUN-2002
                         ORF1.
TT virus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nagase T., Seki N., Ishikawa K., Ohira M., Kawarabayasi Y. Tanaka A., Kotani H., Miyajima N., Nomura N., "Prediction of the coding sequences of unidentified human the coding sequences of 80 new genes (KIAA0201-KIAA0280) danalysis of cDNA clones from cell line KG-1 and brain."; DNA Res. 3:321-329(1996).
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Eukaryota; Metazoa;
Mammalia; Eutheria;
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KIAA0278 protein (HARG)
protein) (Fragment).
KIAA0278 OR HARG OR ARC.
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Kremerskothen J., Barnekow A.;
"Human activity-regulated cytoskeleton-associated
chromosome 8q24.";
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Viruses;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
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EMBL; AF193421; AAF07185.1; ---
EMBL; AF248637; AAG33705.1; ---
EMBL; BC012321; AAH12321.1; ---
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(TrEMBLrel. 21, Last annotation update)
tein (HARG) (Activity-regulated cytoskeleton-associated
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       unclassified ssDNA viruses.
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Pred. No.
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RESULT 12 Q8V7C3 ID Q8V7C AC Q8V7C

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RESULT 11
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InterPro; 1:..
Fam; PF02956; T
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Q9QUD8;
01-MAY-2000
01-MAY-2000
01-JUN-2002
                                                                                                                                                                                                                                                                                                 Erker J.C., Leary T.P., Desai S.M., Chalmers N
Submitted (JAN-1999) to the EMBL/GenBank/DDBJ
EMBL; AF122920; AAD45650.1; -
InterPro; IFR000413; Integrin alpha.
InterPro; IFR0004219; TTVirus_Unk.
Pfam; PF02956; TT_ORF1; 1.
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Erker J.C., Leary T.P., Desai S.M., Chalme
"Analyses of TT virus full-length genomic
J. Gen. Virol. 80:1743-1750(1999).
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Okamoto H., Nishizawa T., Tawara A.,
Kishimoto J., Tanaka T., Miyakawa Y.,
"Species-specific TT viruses in human
                                                                                                                                                                                                                                              Hypothetical SEQUENCE 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=68887;
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TT virus.
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Virology 277:368-378(2000)
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AA; 85948 MW; 4915FE9AEE503E15
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Q63053;
Q1-NOV-1996
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01-NOV-1996
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NON TER
SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A. STRAIN=CBA X C57BL/6; Medrano S., Worley P.F., Scrable H.;
                                                     Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                         Rattus norvegicus (Rat).
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EMBL; U19866; AAA68695.
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MEDLINE=95161073; PubMed=7857651;
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Mammalia; Eutheria; Rodentia;
     SEQUENCE
                                NCBI_TaxID=10116;
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Mammalia; Eutheria; Rodentia;
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ENCE 242 AA; 27428 MW
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Rodentia;
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Pred. No. 1
                                                   Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rattus.
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RESULT Q9Y469 ID Q9 AC Q9 DT 01

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SEQUENCE FROM N.A.
STRAIN=129/SV(EV);
STRAIN=219/SV(EV);
MEDLINE=21359664; PubMed=11466419;
Waltereit R., Dammermann B., Wulff P., Scafidi J., Staubli U.,
Waltereit R., Dammermann M., Kuhl D.;
Kauselmann G., Bundmann M., Kuhl D.;
"Arg3.1/Arc mRNA Induction by Ca2+ and cAMP Requires Protein
"Arg3.1/Arc mRNA Induction by Ca2+ and cAMP Requires Protein
"Arg3.1/Arc mRNA Induction by Ca2+ and cAMP Requires Protein
"Arg3.1/Arc mRNA Induction by Ca2+ and cAMP Requires Protein
                                                                                                                                                                                                 EMBL; AF162777; AAD43586.1; -.
EMBL; AF177701; AAK91587.1; -.
EMBL; BC023127; AAH23127.1; -.
MGD; MGI:88067; Arc.
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01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
Growth factor ARC (ARG3.1/ARC) (Activity regulated
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Submitted (
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Chowdhury S., Lanahan A.A., Worley P.F.;
"The mArc gene, a mouse homolog of rat Arc.";
Submitted (JUN-1999) to the EMBL/GenBank/DDBJ
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01-NOV-1999
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MEDLINE=95296386; PubMed=7777577;
Link W., Konietzko U., Kauselmann G., Krug
                                                                                                                                                                              SEQUENCE
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Mammalia; Eutheria;
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Proc. Natl. Acad. Sci. U.S.A.
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ICE 396 AA; 45353 MW;
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                                       2 RWVRRVRRVWRRVVRRWVRR 24
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l Similarity 47.8%;
ll; Conservative
                                                                                                           Similarity
RWVKREMHVWREVFYRLERWADR
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                                                                                                                                                                              396 AA;
                                                                                      Conservative
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Rodentia;
                                                                                                                                                                              45321 MW;
                                                                                                        47.7%;
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Pred. No. 1.8;
2; Mismatches
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Sciurognathi;
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thi; Muridae;
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RA Merkulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A.,
RA Mount S.M., Moy M., Murphy B., Murphy L., Murny D.M., Nelson D.L.,
RA Melson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,
RA Spier B., Spradling A.C., Stapleton M., Strong R., Sun B.,
Spier E., Spradling A.C., Stapleton M., Stwoski M.P., Smith T.,
RA Spier B., Spradling A.C., Stapleton M., Strong R., Sun B.,
Williams S.M., Woodage T., Worler E., Wang A.H., Wang X.,
RA Williams S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A.,
RA Ye J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng L.,
RA Chong Y.N., Zhong W., Zhou X., Zhu S., Zhu X., Smith H.O.,
RA Gibbs R.A., Myers E.W., Rubin G.M., Venter J.C.;
RT "The genome sequence of Drosophila melanogaster.";
RESience 287:2185-2195(2000)
DR EMBL, ABF48711.1;
DR FlyBase; Psgn0030930; CC5172.
30 SEQUENCE 133 AA; 14510 MW; 161861BFE8ACB6C6 CRC64.
                                                                                                             RESULT
Q9QU36
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Matches 16
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Best Local :
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Q9QU36;
01-MAY-2000
01-MAY-2000
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01-OCT-2000
01-JUN-2002
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Submitted (APR-2000) to the EMBL/GenBank/DDBJ
EMBL; AF261761; ARF2559.1; -.
InterPro; IPR004219; TTYITUS_Unk.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Putative capsid protein TT virus.
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                            (TrEMBLrel.
                                                                                   PRELIMINARY;
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AA; 90844 MW;
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Created)
Last seq
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nt TT virus g
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Best Local S
Matches 16
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Best Local :
             01-MAR-2001
01-MAR-2001
01-MAR-2001
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Q91CZ2;
01-DEC-2001
                                                  Q9ES15;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             intermediately related to TT virus Arch. Virol. 145:979-993(2000). EMBL; AB026929; BAA86945.1; -.
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TTV-like mini virus.
Viruses; ssDNA viruses; Circoviridae.
                                                                                                                                                                                                                                                                                                                                 MEDLINE=21488921; PubMed=11601907; Okamoto H., Nishizawa T., Takahash
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01-JUN-2002
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(Fragment).
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Pro; IPR004219; TTvirus_Unk.
PF02956; TT_ORF1; 1.
NCE 759 AA; 89860 MW; 5B
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17; Conservative
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Copyright (c) 1993 - 2003 Compugen Ltd.
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

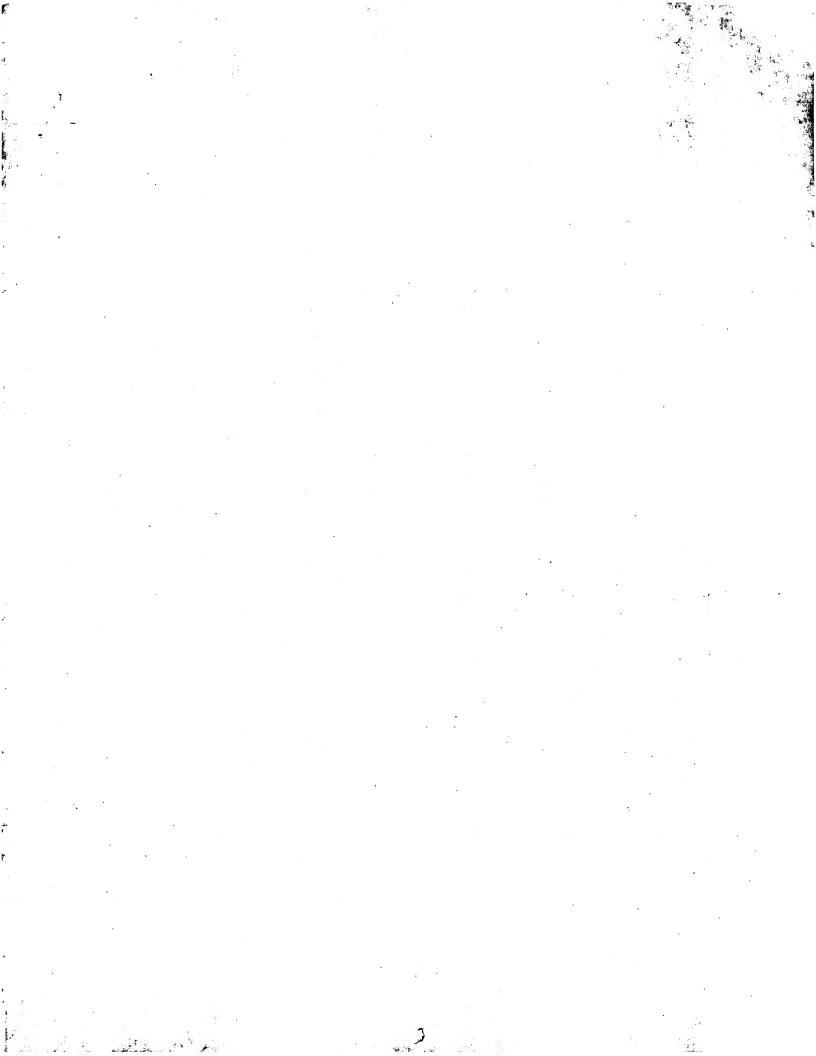
SUMMARIES

| Result No. | Score | Query Match | Query . Match Length DB | BB | ID | Description |
|---------------|-------|----------------|----------------------------|----|--------|--------------------|
| 1 | 66 | 50.8 | 133 | 5 | Q9VX67 | Q9vx67 drosophila |
| N | 64 | 49.2 | 766 | 12 | Q9IFV0 | Q9ifv0 tt virus. p |
| ω | 63 | 48.5 | 656 | 12 | Q9QU36 | Q9qu36 ttv-like mi |
| 4 | 62.5 | 48.1 | 759 | 12 | Q91CZ2 | Q91cz2 tt virus. o |
| ហ | 62 | 47.7 | 242 | 11 | Q9ES15 | Q9es15 mus musculu |
| o, | 62 | 47.7 | 396 | 11 | Q62743 | w |
| 7 | 62 | 47.7 | 3.96 | 11 | Q63053 | Q63053 rattus norv |
| œ | 62 | 47.7 | 396 | 11 | Q9WV31 | Q9wv31 mus musculu |
| 9 | 62 | 47.7 | 460 | 4 | Q9Y469 | Q9y469 homo sapien |
| 10 | 62 | 47.7 | 720 | 12 | Q9DUB7 | Q9dub7 tt virus. o |
| 11 | 62 | 47.7 | 767 | 12 | Q9QUD8 | Q9qud8 tt virus. h |
| 12 | 61 | 46.9 | 49 | 12 | Q8V7C3 | Q8v7c3 tt virus. o |
| 13 | 61 | 46.9 | 683 | 12 | Q9JG64 | Q9jg64 ttv-like mi |
| 14 | 61 | 46.9 | 683 | 12 | Q9JG47 | Q9jg47 ttv-like mi |
| 15 | 60.5 | 46.5 | 113 | N | Q51531 | Q51531 pseudomonas |
| 16 | 59.5 | 45.8 | 765 | 12 | Q9DUH8 | Q9duh8 tt virus. o |
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| 45 | 44 | 43 | 42 | 41 | 40 | 39 | ა 8 | 37 | 36 | 3 5 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 |
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| 53.5 | 54 | 54 | 4 | 4 | 54.5 | 54.5 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55 | 55.5 | 56 | 56 | 56 | 56 | 57 | 57 | 57.5 | 58 | 58 | 58 | 58 | 58 |
| | 41.5 | | | | | | | | | | | | | | | | | | | 43.8 | | | | | | | 44.6 |
| 436 | 745 | 735 | 739 | 178 | 171 | .69 | 761 | 743 | 726 | 726 | 712 | 53 | 53 | 49 | 825 | 736 | 67 | 61 | 57 | 681 | 67 | 111 | 764 | 763 | 744 | 53 | 49 |
| 12 | 12 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | ഗ | 12 | 10 | 12 | 12 | 12 | 12 | 12 |
| Q8QVL3 | Q91PS7 | Q9DUC9 | Q8V717 | Q948J2 | 071097 | Q8V7F2 | Q9WT88 | Q8V7G3 | Q8V7F7 | Q99A80 | Q9DUC1 | Q8V7B7 | Q8V7C0 | Q8V7C2 | Q9DTD4 | Q8V7G6 | Q8V7C5 | Q8V7E3 | Q8V7E7 | Q9W1U5 | Q8V7C6 | Q39682 | Q9JGT1 | Q99A78 | Q8V7G0 | Q9W9H9 | Q8V7C1 |
| Q8qv] | .sd160 | Q9duc9 | Q8v7i7 | Q948j2 | 071097 | Q8v7f2 | Q9wt88 | Q8v7g3 | Q8v7£7 | Q99a80 | Q9duc1 | Q8v7b7 | Q8v7c0 | Q8v7c2 | Q9dtd4 | Q8v7g6 | Q8v7c5 | Q8v7e3 | ~1 | Q9w1u5 c | Q8v7c6 | Q39682 | Q9jgt1 | Q99a78 | Q8 v 7g0 | Q9w9h9 | Q8v7c1 |
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ALIGNMENTS

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| SEQUENCE FROM N.A. SEQUENCE FROM N.A. STRAIN-BERKELEY; MEDLINE=20196066; Adams M.D., Celnik, George R.A., Lewis George R.A., Lewis George R.A., Clowis Sutton G.G., Worter Barandon R.C., Roge Wan K.H., Doyle C. Abril J.F., Agbaya Ballew R.M., Basu Beeson K.Y., Benos Borkova D., Buchan Cherry J.M., Cawle de Pablos B., Delo Dodson K., Doup L. Durbin K.J., Evang Fosler C., Gabriel Glodek A., Gong F. Harris N.L., Harve Hostin D., Houston Jalali M., Kalush Kimmel B.E., Kodir | GPVK67 QPVX67 QPVX67; QPVX6 |
| SEQUENCE FROM N.A. SEQUENCE FROM N.A. STRALINE=BERKELEY; MEDLINE=20196006; PubMed=10731132; Adams M.D., Celniker S.E., Holt R.A. Adamatides P.G., Scherer S.E., Lie P. George R.A., Lewis S.E., Richards S. Sutton G.G., Wortman J.R., Yandell M. Brandon R.C., Rogers YH.C., Blazej Wann K.H., Doyle C., Baxter E.G., Hel Abril J.F., Agbayani A., An HJ., A Ballew R.M., Basu A., Baxendale J., Beeson K.Y., Benos P.V., Berman B.P. Borkova D., Botchan M.R., Bouck J., Burtis K.C., Busam D.A., Butler H., Cherry J. M., Cawley S., Dahlke C., D de Pablos B., Delcher A., Deng Z., M Dodson K., Doup L.E., Downes M., Dug Durbin K.J., Evangelista C.C., For Porra Glodek A., Gong F., Gorrell J.H., Gu Harris N.L., Harvey D., Heiman T.J. Hostin D., Houston K.A., Howland T.J. Jalali M., Kalush F., Karpen G.H., K Kimmel B.E., Kodira C.D., Kräft C., | T 1 Q9YX67 PRELIMINARY; PRT; 133 AA. Q9YX67; Q1-MAY-2000 (TrEMBLrel. 13, Created) 01-MAY-2000 (TrEMBLrel. 13, Last sequence update) 01-MAY-2000 (TrEMBLrel. 13, Last annotation update) 01-MAY-2000 (TrEMBLrel. 13, Last annotation update) CG5172 protein. CG5172. CG5172. CG5173. CG5174. CG5175. CG5175. CG5176. CG5176. CG5177. CG51 |
| Holt R.A., Ev. B., Li P.W., Asl chards S., Asl Yandell M.D., 'S. Blazej R.G. HJ., Andrew dale J., Bayra rman B., Bh s M., Dugan-R C., Ferraz C., Garg N.S., Gu J.H., Gu Z., man T.J., Her n G.H., Ke Z., raft C., Krav. | PRT; 133 AA. Created) Last sequence update) Last annotation update) uit fly). uoda; Tracheata; Hexapoda erygota; Diptera; Brachy Drosophila. |
| SEQUENCE FROM N.A. SEQUENCE FROM N.A. STRAINE=BERKELEY; MEDLINE=2016006; PubMed=10731132; Adams M.D., Celniker S.E., Li P.W., Hoskins R.A., Galle R.F., Admanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F., George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N., George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N., George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N., George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N., Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X., Sutton G.G., Wolson C.R., Miklos G.L.G., Walton R.C., Rogers YH.C., Blazej R.G., Champe M., Pfeiffer B.D., Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G., Abril J.F., Agbayani A., An HJ., Andrews-Ffannkoch C., Baldwin D., Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M., Barlew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M., Borkova D., Botchan M.R., Bouck J., Barokstein P., Brottier P., Borkova D., Botchan M.R., Bouck J., Barokstein P., Brottier P., Borkova D., Botchan M.R., Dang Z., Mays A.D., Dew I., Dietz S., Chandra I., Cherty J.M., Cawley S., Dahlke C., Davenport L.B., Davies P., Duxbin K.J., Evangelista C.C., Ferraz C., Ferriera S., Fleischmann W. Fosler C., Gabrielian A.E., Garg N.S., Gelbart W.M., Glasser K., Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M., Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J., Hostin D., Hoston K.A., Howland T.J., Wei MH., Ibeywam C., Jalai M., Kalush F., Karpen G.H., Ke Z., Kennison J.A., Ketchum K.A. Kimmel B.E., Kodira C.D., Kräft C., Kravitz S., Kulp D., Lai Z., | T 1 Q9VX67 PRELIMINARY; PRT; 133 AA. Q9VX67; Q1-MAY-2000 (TrEMBLrel. 13, Created) Q1-MAY-2000 (TrEMBLrel. 13, Last sequence update) Q1-MAY-2000 (TrEMBLrel. 13, Last annotation update) Q1-MAY-2000 (TrEMBLrel. 13, Last annotation update) CG5172 protein. CG5172. CG5173. CG5174. CG5175. CG5175. CG5176. CG5177. CG5177. CG5177. CG5177. CG5178. CG5178. CG5179. CG5171. CG5171. CG5171. CG5172. CG5172. CG5172. CG5172. CG5172. CG5172. CG5173. CG51 |
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MEDILINE-83189071; PubMed-6221115;

Sanger F., Coulson A.R., Hong G.F., Hi
"Nucleotide sequence of bacteriophage
J. Mol. Biol. 162:729-773(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Yagil E., Dolev S., Oberto J., Kislev N., Ramaiah N., Weisberg R.A.,
"Determinants of site-specific recombination in the lambdoid
coliphage HK022. An evolutionary change in specificity.";
J. MOL. Biol. 207:695-717(1989)
-I- FUNCTION: EXCISIONASE AND INTEGRASE ARE NECESSARY FOR THE EXCISION
OF PROPHAGE FROM THE HOST GENOME BY SITE-SPECIFIC RECOMBINATION AT
                                                                                         SEQUENCE FROM N.A.
MEDLINE=80234646; PubMed=6446713;
Hoess R.H., Foeller C., Bidwell K., Lan
"Site-specific recombination functions
                                                                                                                                                                                                                                                                                                                         Bacteriophage lambda.
Viruses; dsDNA viruses,
Lambda-like viruses.
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SPECIES=Phage HK022;
MEDLINE=89347457; PubMed=2547971;
                                                                                                                                                      "DNA sequence of the int-xis-Pi region overlap of the int and xis genes."; Nucleic Acids Res. 8:1765-1782(1980).
                                                                                                                                                                                           Davies R.W.;
                                                                                                                                                                                                     SEQUENCE FROM N.A. MEDLINE=81053845;
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                                Natl. Acad. Sci. U.S.A. 77:2482-2486(1980).
UNCTION: EXCISIONASE AND INTEGRASE ARE NECESSARY
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RESULT 15
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                                                                                                                                                                                                                                                                                     Fomsgaard A., Hirsch V.M., Allan J.S., Johnson P.R.;
"A highly divergent proviral DNA clone of SIV from a distir
of African green monkey.";
Virology 182:397-402(1991).
-!- FUNCTION: DETERMINES VIRUS INFECTIVITY.
-!- MISCELLANEOUS: THIS IS AN AFRICAN GREEN MONKEY ISOLATE.
                                                                                                                               InterPro; IPR000475;
Pfam; PF00559; Vif; ;
                                                                                                                                                      EMBL; M66437; AAA91924.1; -. EMBL; M58410; AAA47589.1; -.
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                                                                                              SEQUENCE
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                                                                                                                                                                                                                                       the European Bioinformatics Institute.
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KQWI -- VRVVWRVSERQISRW
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(Rel. 26, Last sequence update)
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tivity factor (SOR protein) (Q
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                                                                                                                                                                SEQUENCE FROM N.A.
STRAIN=CDC 1551 / Oshkosh;
Fleischmann R.D., Alland D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-MAY-2000 (Rel. 39, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Putative membrane protein mmpL/12.
MMPL/12 OR RV1522C OR MTI573 OR MTCY19G5.06.
Mycobacterium tuberculosis.
Bacteria; Actinobacteria; Actinobacteria (class); Actinobacteridae;
Actinomycetales; Corynebacterineae; Mycobacteriaceae; Mycobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-MAY-2000
30-MAY-2000
16-OCT-2001
                                                                                                   Peterson J., DeBoy R.,
Kolonay J.F., Nelson W.
Delcher A., Utterback T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PIR; A26512; A26512.
InterPro; IPR001737;
InterPro; IPR000051;
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  laboratory strains.";
Submitted (APR-2001) to the
-!- SUBCELLULAR LOCATION: Ir
                                                                 "Whole genome comparison
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=98295987;
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Antibiotic resistance; Transferase; Methyltransferase; SEQUENCE 299 AA; 34138 MW; 63990AA894C044C6 CRC64;
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SIMILARITY: BELONGS TO THE FAMILY.
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                                                                                                        and D. Eisen J.A., Carpenter L., White O., Dodson R., Gwinn M.L., Haft D., Hickey E., Dodson L.A., Ermolaeva M.D., Salzberg T., Weidman J., Khouri H., Gill J., Mikula
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P11683; P1640
01-OCT-1989
01-AUG-1990
01-OCT-1996
                                                                                               SPECIES=Phage 434;
MEDLINE=88167849; I
Limberger R.J., Can
"Functional element
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SPECIES-Phage 434;
MEDLINE-91346141; PubMed-1715186;
Baker J., Limberger R., Schneider
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Bacteriophage HK022.
Viruses; dsDNA viruses,
Lambda-like viruses.
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TIGR; MT1573;
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"Recombination and modular
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                              nctional elements of DNA upstream conserved in bacteriophages 434 a e 61:135-144(1987).
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IPR000731; HMGCR/patch_5TM
IPR004869; MMPL.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Whiki T., Yonekawa H., Kominami R.;
"A novel type of myosin encoded by the mouse deafness gene shaker-2.";
Biochem. Biophys. Res. Commun. 248:655-659(1998).
-i- FUNCTION: MYOSINS ARE ACTIN-BASED MOTOR MOLECULES WITH ATPASE
ACTIVITY. UNCONVENTIONAL MYOSINS SERVE IN INTRACELLULAR MOVEMENTS.
THEIR HIGHLY DIVERGENT TAILS ARE PRESUMED TO BIND TO MEMBRANOUS
COMPARTMENTS, WHICH WOULD BE MOVED RELATIVE TO ACTIN FILAMENTS (BY
SIMILARITY). MAY PLAY A ROLE IN THE FORMATION OR MAINTENANCE OF
THE ACTIN-RICH STRUCTURES OF THE INNER EAR SENSORY HAIR CELLS.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Characterization of the human and mouse unconventional myosin XV genes responsible for hereditary deafness DFNB3 and shaker 2."; Genomics 61:243-258(1999).
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MEDLINE=20021762; PubMed=10552926;
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Wakabayashi Y., Takahashi Y., Kikkawa Y.,
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SIMILARITY:
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SIMILARITY:
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TISSUE SPECIFICITY: IN THE DEVELOPING INNER EAR, EXPRESSED IN TISSUE SPECIFICITY: IN THE DEVELOPING INNER EAR, EXPRESSED IN COCHLEA AND VESTIBULAR APPRARATUS. EXPRESSION APPEARS TO BE COCHLEA AND VESTIBULAR NEUROSENSORY CELLS AND UPPER EPITHELIAL LAYER OF MACULA SACCULA. ALSO EXPRESSED IN MACULA UTRICULI AND CRISTAE AMPULLARIS OF THE SEMICIRCULAR CANALS. IN ADULT COCHLEAR HAIR CELLS, HIGHEST EXPRESSION IN STEREOCILIA AND APICAL BODY. DISEASE: DEFECTS IN MYOLSA ARE THE CAUSE OF SHAKER 2 (SH2), A CONDITION CAUSING DRAFNESS, CIRCLING BEHAVIOR, HEADTOSSING AND HYDERACTIVITY. AUDITORY HAIR CELLS OF AFFECTED ANIMALS HAVE VERY STEREOCILIA AND A LONG ACTIN-CONTAINING PROTRUSION AT THEIR BASAL END.
MGI:1261811; Myo15
                       AF144095;
AF053130;
AB014510;
P10587; 1B
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                                                                                                                                                                 email to license@isb-sib.ch).
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                                              AAF05904.1; -.; AAC40124.1; -.
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CONTAINS 1 BAND 4.1-LIKE DOMAIN
CONTAINS 2 10 DOMAINS.
CONTAINS 1 SH3 DOMAIN.
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livan S.L.,
Friedman T.B.,
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SMART; SM00242; MYSG; 1.

SMART; SM00242; MYSG; 1.

SMART; SM00326; SH3; 1.

R PROSITE; PS50096; IQ; 2.

R PROSITE; PS500661; BAND 41 2; FALSE NEG.

R PROSITE; PS50057; BAND 41 3; FALSE NEG.

R PROSITE; PS50057; BAND 41 3; FALSE NEG.

R PROSITE; PS50057; BAND 41 3; FALSE NEG.
                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                               Matches
        SEQUENCE FROM N.A.

STRAIN=ATCC 11416;

MEDLINE=87248111; PubMed=3036668;

MEDLINE=87248111; PubMed=3036668;

Epp J.K., Burgett S.G., Schoner B.E.;

"Cloning and nucleotide sequence of a Straptomyces thermotolerans.";

Gene 53:73-83(1987).

-i- FUNCTION: PROBABLE RNA METHYLASE.
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P13079;
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NP_BIND
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                                                                                          plasmid p0J159.
Bacteria, Actinobacteria, Actinobacteria (class); Actinobacteridae;
Bacteria, Streptomycineae; Streptomycetaceae; Streptomyces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam;
                                                                                                                                                         01-JAN-1990
01-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRINTS; PR00193; MYOSINHEAVY. ProDom; PD000355; myosin_head; SMART; SM00015; IQ; 2.
                                                                                                                              Streptomyces
                                                                                                                                        CARB.
                                                                                                                                                  rRNA
                                                                                                                                                                            01-JAN-1990
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cransferase (EC 2.1.1.-) (Carbom
                                                                                                                                                                                                                                                                               Conservative
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myosin_head; 1.
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IQ region.
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METHYLASE. CARB CONFERS RESISTANCE OTHER MACROLIDES, LINCOMYCIN AND
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Pred. No.
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L -> R (IN REF. 3).
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REGULATORY DOMAIN
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AND SEVERAL

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RA Holzer E., Brandt A., Peters S., van Staveren M., Dirkse W., RA Moodjman P., Klein Lankhorst R., Rose M., Hauf J., Koetter P., RA Berneiser S., Hempel S., Feldpausch M., Lamberth S., Van den Daele H., RA De Keyser A., Buysshaert C., Gielen J., Villarroel R., De Clercq R., RA Van Montagu M., Rogers J., Cronin A., Quail M., Bray-Allen S., RA Clark L., Doggett J., Hall S., Kay M., Lennard N., McLay K., Mayes R., RA Clark L., Doggett J., Hall S., Kay M., Lennard N., McLay K., Mayes R., RA Dose S., de Haan M., Marse A.C., Schaefer M., Mclar T.-H., RA Dose S., de Haan M., Marse A.C., Schaefer M., Dauner D., Herzl A., RA Massenet O., Quigley F., Clabauld G., Muendlein A., Felber R., RA Schnabl S., Hiller R., Schmidt W., Lecharny A., Aubourg S., Ra Gibbons T., Weber N., Vandenbol M., Bargues M., Terol J., Torres A., RA Feigher P., Cooke R., Berger C., Monfort A., Casacuberta E., RA Frishman D., Haase D., Lemcke K., Mewel H.-W., Stocker S., RA Frishman D., Haase D., Lemcke K., Mewel H.-W., Stocker S., RA Frishman D., Haase D., Lemcke K., de la Bastide M., Habermann K., RA Frishman D., Ralicki J., Graves T., Harmon G., Edwards J., RA Schneking T., Kalicki J., Graves T., Harmon G., Edwards J., RA Nelson J., Spieth J., Ryan E., Andrews S., Geisel C., Layman D., RA Minx P., Bentley D., Fulton B., Miller N., Greco T., Kemp K., RA Nelson J., Berthy D., Fulton B., Miller N., Greco T., Kemp K., RA Nelson J., Spieth J., Ryan E., Andrews S., Geisel C., Layman D., RA Man, S., Schody N., Hasegawa A., Hamerd M., Joshu C., RA Men, S., Schody N., Hasegawa A., Hamerd M., Johnson A., RA Chen E., Marra M., Martienssen R., McCombie W.R., Till S., Shah R., Chen E., Marra M., Martienssen R., McCombie W.R., Till S., Shah R., Martienssen R., McCombie W.R., Till S., Shah R., Martienssen R., McCombie W.R., Till S., Shah R., McCombie W.R., Till S.,
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                                                                                                                                                                                                                                                                                                                                                                          the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce or send an email to license@isb-sib.ch).
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                                                                                                              InterPro; IPR001312; Hexokinase
Pfam; PF00349; hexokinase; 1.
Pfam; PF03727; hexokinase2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Reichert B., Portetelle D., Perez-Alonso M., Boutry M., Bancroft I., Vos P., Hoheisel J., Zimmermann W., Wedler H., Ridley P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the European Bioinformatics Institute. Th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced throubetween the Swiss Institute of Bioinformatics and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nature 402:769-777(1999).
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                                       PRINTS; PR00475; HEXOKINASE.
ProDom; PD001109; Hexokinase; 1.
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                                                                                                                                                                                                                                                       CAB80449.1; -.
                                                                                                                                                                                                                                                                                          CAB38932.1; -.
Glycolysis;
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TO THE HEXOKINI
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ATP-binding;
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Transmembrane
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RESULT 10
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DOMAIN
SEQUENCE
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                                                                                                                                                                            PINITY; FACULE OF TIGREPAMS; TIGREPAMS; TIGREPAMS; TIGREPAMS; TIGREPAMS; TIGREPAMS; Transferase; Kinase; ATP-binding; Complete proteome.

Transferase; Xinase; ATP-binding; Complete proteome.

ATP (POTENTIAL).
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MEDLINE=97105885; PubMed=8948633;
Himmelreich R., Hilbert H., Plage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01.NOV-1997 (Rel. 35, Created)
01.NOV-1997 (Rel. 35, Last sequence update)
15-UN-2002 (Rel. 41, Last annotation update)
Uridine kinase (EC 2.7.1.48) (Uridine monophosphokinase) (Cytidine
                                                                                                                                                                                                                                                                                                                            between the Swiss Institute of Bioinformatics and the the European Bioinformatics Institute. There are no reuse by non-profit institutions as long as its contermodified and this statement is not removed. Usage by
                                                                                                                                                                                                                                                                                                                                                                                                                              -I- CATALYTIC ACTIVITY: ATP + uridine = ADP -
-I- CATALYTIC ACTIVITY: ATP + cytidine = ADP -
-I- PATHWAY: Pyrimidine salvage pathway.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   pneumoniae.";
Nucleic Acids Res.
                                                                                                                                                                                                                                                                                                      or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through
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                                                                                                                                                                                                                                                                                                                   entities requires a license agreement
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=2104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mycoplasma
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                                                                                                                                                                                                                                                   InterPro; IPR001324; PRK.
InterPro; IPR000764; Uridine_kin.

    -!- SUBCELLULAR LOCATION: Cytoplasmic (By similarity)
    -!- SIMILARITY: BELONGS TO THE URIDINE KINASE FAMILY.

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 STANDARD; ; Q9QWL6;
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36.4%;
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Pred. No.
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                                                                                                                                        Score 48.5;
Pred. No. 3
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                                                                                                                                                                 the European Bioinformatics Institute. There are no rest
use by non-profit institutions as long as its content
modified and this statement is not removed. Usage by ar
entities requires a license agreement (See http://www.isb-
or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cole S.T., Brosch R., Parkhill J., Garnier T., Churcher C., Harris Gordon S.V., Eiglmeier K., Gas S., Baris III, Tekaia F., Badcock K., Basham D., Brown D., Chillingworth T., Comor R., Bavies R., Devlin K., Feltwell T., Gentles S., Hamlin N., Holroyd Hornsby T., Jagels K., Krogh A., McLean J., Moule S., Murphy L., Oliver S., Osborne J., Quail M.A., Rajandream M.A., Rogers J., Rutter S., Seger K., Skelton S., Squares S., Squares R., Sulston J.E., Taylor K., Whitehead S., Barrell B.G.; "Deciphering the biology of Mycobacterium tuberculosis from the complete genome sequence.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ribosomal
SEQUENCE
                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is picus
the Swiss Institute of Bioinformatics
That That It is picus
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                                                                                                                                                                                                                                                                                          laboratory strains.";
Submitted (APR-2001) to
-!- SIMILARITY: BELONGS
                                                                                                                                                                                                                                                                                                                                                         STRAIN-CDC 1551 / Oshkosh;
Fleischmann R.D., Alland D., Eisen J.A., Carpenter L., White O.,
Fleischmann R.D., Deboy R., Dodson R., Gwinn M.L., Haft D., Hickey E.,
Peterson J., DeBoy R., Dodson L.A., Ermolaeva M.D., Salzberg
Kolonay J.F., Nelson W.C., Umayam L.A., Ermolaeva M.D., Salzberg
Delcher A., Utterback T., Weidman J., Khouri H., Gill J., Mikula
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-MAY-2000 (Rel. 39, Created)
30-MAY-2000 (Rel. 39, Last sequence
16-OCT-2001 (Rel. 40, Last annotatic
Hypothetical PE-PGRS family protein
RV0278C OR MT0291 OR MTV035.06C.
                                         Hypothetical
SIGNAL
                                                                                                                            EMBL; AL021930;
EMBL; AE006936;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MYCTU
                                                                                                 TubercuList; Rv0278c;
                                                                                                            TIGR; MT0291;
                                                                                                                                                                                                                                                                                                                                                   Bishai W.;
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Actinomycetales; Corynebac
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                                                                                                                                                                                                                                                                                                                                    "Whole genome comparison of Mycobacterium tuberculosis
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AE006936; AAK44511.1;
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105 AA;
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د
; Signal; Complete proteome POTENTIAL.
HYPOTHETICAL PE-PGRS FAMILY RV0278C.
M -> I (IN REF. 2).
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Q9T071;
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16-OCT-2001
16-OCT-2001
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15-JUN-2002 (Rel. 41, Last annotation update)
Hypothetical protein RSc3030 precursor.
RSC3030 OR RS04727.
Ralstonia
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RALSO
               16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation updat
Probable hexokinase (EC 2.7.1.1).
AT4G37840 OR T28I19.120.
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or send an email to license@isb-sib.ch).
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Arlat M., Billault A., Brottier P., Camus J.C., Cattol
Chandler M., Choisne N., Claudel Renard C., Cunnac S.,
Gaspin C., Lavie M., Moisan A., Robert C., Saurin W.,
Siguier P., Thebault P., Whalen M., Wincker P., Levy N
Weissenbach J., Boucher C.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hypothetical protein; Signal; SIGNAL 1 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a coefficient the Swiss Institute of Bioinformatics and the EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Genome sequence of the plant pathogen Ralstonia Nature 415:497-502(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AL646073; CAD16739.1; -.
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Schiex T.,
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Arabidopsis

thaliana (Mouse-ear cress)

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PDB; 1BUJ; 11-113.

EcoGene; EG10062; arcB.

EcoGene; EG10062; arcB.

InterPro; IPR003594; ATPbind ATPase.

InterPro; IPR003591; HIS KIN sig.

InterPro; IPR003661; His_kinA.

(InterPro; IPR000770; PAS-assoc_C.

R InterPro; IPR0000104; PAS domain.

R InterPro; IPR001789; Response_reg.

R InterPro; IPR001789; Response_reg.
                                             SMART; SM00387; I
SMART; SM00073; I
SMART; SM00388; I
SMART; SM00091;
SMART; SM00448;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDINE-98437504; PubMed-9761838; Kato M., Mizumo T., Hakoshima T.; "Crystallization of a complex between a nov HPt domain, of the anaerobic sensor kinase response regulator Chey.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         X-RAY CRYSTALLACEMENT. PubMed-10531481;
MEDLINE=20003135; PubMed-10531481;
Kato M., Mizuno T., Shimizu T., Hakoshima T.;
Refined structure of the histidine-containing-phosphotransfer (HPt)
"Refined structure of the histidine ArcB from Escherichia coli at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Ethe European Bioinformatics Institute. There are no rest use by non-profit institutions as long as its content
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TIGRFAMS; TIGR00229; sensory_box; prosize; ps50109; HIS_KIN; 1. prosite; ps50113; paC; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                        or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             X-RAY CRYSTALLOGRAPHY (1.57 ANGSTROMS)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=97207018; PubMed=9054511;
Kato M., Mizuno T., Shimizu T., H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7-A resolution.";
a Crystallogr. D 55:1842-1849(1999).
Trystallogr. D 55:1842-1849(1999).
FUNCTION: Member of the two-component regulatory system arcB/arcA.
Sensor-regulator protein for anaerobic repression of the arc
modulon. Activates arcA via a four-step phosphorelay. ArcB can
also dephosphorylate arcA by a reverse phosphorelay involving His-
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SIMILARITY:
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                                                                                                                     n; PF00072; response_reg;
n; PF00512; signal; 1.
n; PF00989; PAS; 1.
n; PF02518; HATPase_c; 1.
om; PD000039; Response_re;
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                                              ; H18KA;
; PAS; 1:
; REC; 2:
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CONTAINS 1 RESPONSE REGULATIORY DOME
CONTAINS 1 PAS (PER-ARNT-SIM) DIVER
CONTAINS 1 PAS-ASSOCIATED C-TERMINE
                                                                                                   9; Response_reg; 1.
HATPase_c; 1.
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(See http://www.isb-sib.
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Q9YD25;
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                                                                                            use by non-profit institutions as long modified and this statement is not removed. entities requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the El the European Bioinformatics Institute. There are no rest
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Transmembrane; Inner membrane; Transcription
                                    EMBL; AP000060; BAA80072.1; -. InterPro; IPR00054; Ribosomal_L31e.
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RIBOSOMAL_L31E; FALSE_NEG

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REDLINE=21156:21; PubMed=11258796;

X MEDLINE=21156:221; PubMed=11258796;

X Hayashi T., Makino K., Ohnishi M., Kurokawa K., Ishii K., Yokoyama K.,

A Hayashi T., Makino K., Ohnishi M., Kurokawa K., Ishii K., Yokoyama K.,

A Han C.-G., Ohtsubo E., Nakayama K., Murata T., Tanaka M., Tobe T.,

X Iida T., Takami H., Honda T., Sashkawa C., Ogasawara N., Yasunaga T.,

X Kuhara S., Shiba T., Hattori M., Shinagawa H.;

XI "Complete genomic sequence of enterchemorrhagic Escherichia coli

XI "Complete genomic comparison with a laboratory strain K-12.";

XI "Complete genomic comparison with a laboratory strain K-12.";

XI "Complete genomic comparison with a laboratory system arcB/arcA.

COLUMN Res. 8:11-22(2001).

COLUMN Res. 8:11
                                                                                                                                                                                                      R Pfam; PF00512; signal; 1.

R Pfam; PF00518; HATPase c; 1.

R Pfam; PF02518; HATPase c; 1.

R SMART; SM000387; HATPase c; 1.

R SMART; SM000388; HisKA; 1.

R SMART; SM00091; PAS; 1.

R PROSITE; PS0109; HIS KIN; 1.

R PROSITE; PS50112; PAS; 1.

R PROSITE; PS50112; PAS; 1.

R PROSITE; PS50111; RESPONSE REGULATORY; 1.

R PROSITE; PS50110; RESPONSE REGULATORY; 1.
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the European Bioinformatics Institute
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           domain (By similarity).

SIMILARITY: CONTAINS 1 RESPONSE REGULATORY DOMAIN.

SIMILARITY: CONTAINS 1 PAS (PER-ARNT-SIM) DIMERIZATION DOMAIN.

SIMILARITY: CONTAINS 1 PAS-ASSOCIATED C-TERMINAL (PAC) DOMAIN.
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Blattner F.R.;
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                 MUTAGENESIS OF HIS-292; ASP-576 AND HIS-71 STRAIN=K12 / MC410; STRAIN=K12 / MC410; MEDLINE=20309722; PubMed=10851007; Kwon O., Georgellis D., Lin E.C.C.; Kwon O., Georgellis D., Lin E.C.C.; "Phosphorelay as the sole physiological reproduced by the arc two-component system of Escheric J. Bacteriol. 182:3858-3862(2000).
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"Signal decay through a reverse
signal transduction system.";
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"In vitro phosphorylation study of
transduction system of Escherichia
J. Bacteriol. 179:5429-5435(1997).
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Blattner F.R., Plunkett G. III, Bloch C.A., Perna N.T., Burl
Riley M., Collado-Vides J., Glasner J.D., Rode C.K., Mayhew
Gregor J., Davis N.W., Kirkpatrick H.A., Goeden M.A., Rose I
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P22763;
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Georgellis D., Kwon O., De Wulf P
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Mau B., Shao Y.;
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STRAIN=K12 / MG1655;
X-RAY CRYSTALLOGRAPHY (2.06 ANGSTROMS)
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hi S., Matsuda Z., Fujiwara T., I
e arcB gene of Escherichia coli e
anaerobic repression of the arc
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iration control sensor protein
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SECONDARY TRANSMITTER DOMAIN (POTENTIAL).
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CBAEO04B007F9D30 CRC64;
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              SECE SULSO
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unpublished observations (NOV-2001).
-i- FUNCTION: Probable role in the g
-i- SUBCELLULAR LOCATION: Integral m
-i- TISSUE SPECIFICITY: Expressed in
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FlyBase; FBgn0041235; Gr59c.
Hypothetical protein; Receptor; G-protein
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Curr. Biol. 11:822-835(2001).
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Clyne P.J., Warr (
"Candidate taste:
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   Preprotein,
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SIMILARITY: BELONGS
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RESULT 3
ARCB ECO57 STANDARD; PRT; 778 AA.

AC P583G3;
DT 15-JUN-2002 (Rel. 41, Created).
DT 15-JUN-2002 (Rel. 41, Last sequence update)
DT 15-JUN-2002 (Rel. 41, Last annotation update)
DT Acrobic respiration control sensor protein arcB
DE Aerobic respiration control sensor protein arcB
GN ARCB OR Z4574 OR ECS4089.

OS Escherichia coli OL57:H7.

OC Bacteria; Proteobacteria; gamma subdivision; Ent
CC Escherichia.

OX NCBI TaxID=83334;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=0157:H7 / EDL933 / ATCC 700927;
RX MEDLINE=21074935; PubMed=11206551;
RA Perna N.T., Plunkett G. III, Burland V., Mau B.,
RA Rose D.J., Mayhew G.F., Evans P.S., Gregor J., K
RA Posfai G., Hackett J., Klink S., Boutin A., Shao
RA Grotbeck E.J., Davis N.W., Lim A., Dimalanta E.T
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KMEDLINE=21332296; PubMed=11427726;

KMEDLINE=21332296; PubMed=11427726;

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STRAIN=0157:H7 / EDL933 / ATCC 700927;

MEDLINE=21074935; PubMed=11206551;

Perna N.T., Plunkett G. III, Burland V., Mau B., Glasner J.D.

Rose D.J., Mayhew G.F., Evans P.S., Gregor J., Kirkpatrick H.

Posfai G., Hackett J., Klink S., Boutin A., Shao Y., Miller

Prostai G., Hackett J., Lim A., Dimalanta E.T., Potamousi
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InterPro; IPR004795; SecE_euk_arch.
TIGRPAMs; TIGR00327; SecE euk_arch; 1.
PROSITE; PS01067; SECE SECEG1G; FRAISE_NEG.
Protein transport; Translocation; Transmembrane;
TRANSMEM 40 60 POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a continuous the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and foentities requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
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Archaea; Crenarchaeota;
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-!- SIMILARITY: BELONGS TO THE SECE/SEC61-GAMMA FAMILY.
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                                                                                                                           June 9, 2003, 11:40:31; Search time 4.85106 Seconds (without alignments) 205.199 Million cell updates/sec
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Copyright (c) 1993 - 2003 Compugen Ltd.
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Minimum DB seq length: 0
Maximum DB seq length: 200000000

Total number of hits satisfying chosen parameters:

112892

112892 seqs, 41476328 residues

Searched:

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database : SwissProt_40:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| | | | | | | | | | | | | | | | | | | | | | | | • | | | | | | | | | | | |
|--------------------|-----|------------|-------------|--------------------|-----------|----|----------|--------------------|--------------------|------------|------------|------------|--------------------|------------|------------|-----------|------|----------|-----------|----|------------|------------|--------------------|--------------------|-----------|--------------|------------|------------|------------|------------|------|------------|---------------|----------------|
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| FUFK_HOMAN | | YOOK CAREL | PPOX MYCTU | ERD1_KLULA | RFE PASMU | | POL_RSVP | NCAP_MEASY | NCAP_MEASI | NCAP_MEASH | NCAP_MEASA | NCAP MEASE | RL19_AERPE | RL19_SULSO | MML1 MYCTU | GPH PSESS | :31 | | VIF_SIVAI | | VXIS_BP434 | MMLC_MYCTU | CARB_STRTH | MY15 MOUSE | URK MYCPN | | YU30 RALSO | Y278 MYCTU | RL31 AERPE | ARCB_ECOLI | | SECE_SULSO | G59C_DROME | ID |
| O15530 nomo sapien | | ν. | | P41771 kluyveromyc | | 0 | 4 | P26030 measles vir | P26029 measles vir | 0 measles | | l measles | Q9yf93 aeropyrum p | Ψ | | | | | | | ω | տ | P13079 streptomyce | Q9qzz4 mus musculu | 7 | 1 arabidopsi | ralstonia | mycobacter | D) | o | ω | | lu5 drosophil | Description |
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| 4 5 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 |
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| 43 | 43 | 43 | 43 | 43 | 43.5 | 43.5 | 43.5 | 44 | 44 | 44. | 44 |
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| _ | | P54020 methanococc | P39231 bacter | . P08130 mugil | | Q9x6x4 myxococ | Q06398 oryza sativ | O53735 mycobac | Q27707 nosema | O55173 rattus norv | |

ALIGNMENTS

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Rajandream, M.A.; Rogers, J.; Rutter, S.; Seeger, K.; Skelton, S.; Squares, S. Nature 393, 537-544, 1998
A;Authors: Sqares, R.; Sulston, J.E.; Taylor, K.; Whitehead, S.; Barrell, B.G. A;Title: Deciphering the biology of Mycobacterium tuberculosis from the complete A;Reference number: A70500; MUID:98295987; PMID:9634230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Gene: KVU2/0C
C;Superfamily: elastin
hexokinase homolog 728I19.120 - Arabidopsis thaliana C;Species: Arabidopsis thaliana (mouse-ear cress) C;Date: 30.Apr.1999 #sequence_revision 30-Apr.1999 #text_change C;Accession: 706031
                                                                                           RESULT 14
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               submitted to GenBank, March 1997
A;Description: Molecular analysis of the cDNA coding for an unconventional myosin from a.paference number: A59251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            myosin - Acetabularia cliftonii
C;Species: Acetabularia cliftonii
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A; Residues: 1-957 < COL>
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A;Genetic code: SGC5
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A; Accession: A59251
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                                                                                                                                                                                                                                                                                                                                             Superfamily: myosin motor domain homology;97-799/Domain: myosin motor domain homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Status: preliminary; not compared with conceptual translation
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;Vugrek, O.; Menzel,
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Experimental source: strain H37Rv
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l Similarity 40.7%;
ll; Conservative
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Pred. No. 64;
7; Mismatches
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Pred. No.
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Job time : 10.9574 secs

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RESULT 15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Map position: 4
A;Introns: 92/2; 142/3; 227/3; 279/3; 312/3; 356/2; 383/3
C;Superfamily: hexokinase; hexokinase homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               submitted to the Protein St
A;Reference number: Z15484
A;Accession: T06031
A;Molecule type: DNA
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A;Molecule type: mRNA
A;Residues: 1-640 <GLO>
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C;Species: C
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Best Local (
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                                                 460 RRLORRWRRRGRGWRRRVRR
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Chlamydomonas reinhardtii
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R;Sossin, W.S.; Kreiner, T.; Barinaga, M.; Schilling, J.; S
J. Biol. Chem. 264, 16933-16940, 1989
A;Title: A dense core vesicle protein is restricted to the
A:Reference number: A34413; MUID:89380331; PMID:2777814
                                                                                  atrial gland granule-specific antigen precursor - California sea C;Species: Aplysia californica (California sea hare)
C;Date: 22-Jun-1990 #sequence_revision 22-Jun-1990 #text_change :
C;Accession: A34413
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A;Authors: Sqares, R.; Sulston, J.E.; Taylor, K.; Whitehead, S.; Barrell, B.G.
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H70846
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C;Species: Aeropyrum pernix
C;Date: 20-Aug-1999 #seconomic
                                                                                                                                                                                                                                                                                                                                                                                                                A; Gene: Rv33450
C; Superfamily:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Molecule type: DNA
A;Residues: 1-1538 <COL>
A;Cross-references: GB:AL021841; GB:AL123456; NID:g3261517;
A;Experimental source: strain H37Rv
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A; Residues: 1-105 < KAW>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Title: Complete genome sequence of an aerobic hyper-thermophilic Crenarchaeon, Aeropy
A;Reference number: A72450; MUID:99310339; PMID:10382966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  awa, H.; Takamiya, M.; Masuda,
DNA Res. 6, 83-101, 1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Taylor, K., Whitehead, S., Barrell, B.G., Title: Deciphering the biology of Mycobacterium tuberculosis from the complete Reference number: A70500; MUID:98295987; PMID:9634230 Accession: H70846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ypothetical glycine-rich protein Rv3345c - Mycobacterium tuberculosis (strain; Species: Mycobacterium tuberculosis; Species: Mycobacterium tuberculosis; Space: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 20-Jun-2000
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Best Local :
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Date: 20-Aug-1999 #sequence_revision
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Pred. No. 2
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                                                                M.; Schilling, J.; Scheller,
                                                                                                     22-Jun-1990 #text_change 21-Jul-2000
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hi, T.; Tana
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T.; Kudoh, Y.;
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                          Query Match
Best Local S
Matches
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A;Map position: 1
A;Introns: 10/2; 44/1; 118/3; 152/2; 183/2;
C;Superfamily: human alpha,alpha-trehalase
                                                                                                                                                                                                                                     A;Cross-references: EMBL:AF039713; PIDN:AAB96724.1; GSPDB:GN00019; A;Experimental source: strain Bristol N2; clone F57B10 C;Genetics:
                                                                                                                                                                                                                                                                                                                                                             R;Greco, T.; Elliott, G.; Keppler, D. submitted to the EMBL Data Library, December 1997 A;Description: The sequence of C. elegans cosmid
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RESULT
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                                                                                                                                                                                                                     A;Gene: CESP:F57B10.7
                                                                                                                                                                                                                                                                                                                                              A; Reference number: Z21219
                                                                                                                                                                                                                                                                                                                                                                                                           C;Accession: T32743
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A; Residues: 1-432 < SOS>
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A; Status: pro
                                                                                                                                                                                                                                                                                                A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                               A;Status: preliminary; translated from GB/EMBL/DDB.
                                                                                                                                                                                                                                                                                                                                 A;Accession: T32743
                                                                                                                                                                                                                                                                                                                                                                                                                                                           nypothetical
                                                                                                                                                                                                                                                                                                                                                                                                                        ypothetical protein F57B10.7 - Caenorhabditis elegans;Species: Caenorhabditis elegans;Date: 29-Oct-1999 #sequence revision 20-0-- 1000 "..."
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Best Local 9
                                                                                                                           Query Match
Best Local
                                                                                                            Matches
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                                                                           1 RRWVRRVRRVWRRVVRVVR 19
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                                            RRWALHLHRIWKDLCRKVR
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                                                                                                          Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                            #sequence_revision 29-Oct-1999 #text_change
                                                                                                                       39.2%;
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Pred. No.
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Pred.
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                                                                                                                         26;
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                                                                                                                                                                                      425/3;
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                                                                                                                                        Length 570
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C;Species: Yersinia pestis
C;Species: Yersinia pestis
C;Date: 02-Nov-2001 #sequence_revision 02-Nov-2001 #text_change 27-Nov-2001
C;Date: 02-Nov-2001 #sequence_revision 02-Nov-2001 #text_change 27-Nov-2001
C;Accession: AD0432

                                                                                                                                                                                      C;Superfami
C;Keywords:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Reference number:
A; Accession: AD0432
                                                                                                                                                                                                                                                                                                               A;Gene: arcB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: DNA
A; Residues: 1-778 < KUR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Title: Genome sequence of Yersinia pestis,
A;Title: number: AB0001; MUID:21470413; PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Status:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             aerobic respiration
                                                                                                                                                                                                                                                  Superfamily:
                                                                                                                                                                                                                                                                                                                                                                     Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                      Cross-references: GB:AL590842;
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                                                                                                                                                                                      phosphotransferase
                                                                                                                                                                                                                                            aerobic respiration
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      39.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                      PIDN:CAC92784.1; PID:g15981477;
Score 51; DB
Pred. No. 34;
                                                                                                                                                                                                                                            control
                                                                                                                                                                                                                                                  sensor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PMID:11586360
                                                            DB
                                                                  2
                                                                                                                                                                                                                                            protein arcB;
                                                            Length 778;
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                                                                                                                                                                                                                                            regulator
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Local Similarity

8

Conservative

7;

Indels

0

Gaps

0

homol

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A; dens: a.c., A; dens: A; Map position: 69.5 min A; Map position: 69.5 min C; Superfamily: aerobic respiration control sensor protein arcB; respiration; phosphohistidine; phosphoprotein; C; Keywords: autophosphorylation; phosphohistidine; phosphoprotein; F;23-50/Domain: transmembrane #status predicted <TM2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rishe, Q.; Singh, R.K.; Confalonieri, F.; Zivanovic, Y. Jong, I.; Jeffries, A.C.; Kozera, C.J.; Medina, N.; Pearrett, R.A.; Ragan, M.A.; Sensen, C.W.; Van der Oost, submitted to GenBank, April 2001
A;Description: Sulfolobus solfataricus complete genome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
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                                                                                                                                                             A; Cross-references:
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                                                                                                                                                                                                  A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Science 277, 1453-1462,
                                                                                                                                                                                                                                                                         Residues: 1-776 <BLAT>
Cross-references: GB.RE000400; GB:U00096; NID:g2367203;
Experimental source: strain K-12, substrain MG1655
Tuchi, S.; Matsuda, Z.; Fujiwara, T.; Lin, E.C.C.
ol. Microbiol. 4, 715-727, 1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;Title: The arcB gene of Escherichia coli encodes a sensor-regulator protein;Reference number: JU0295; MUID:90355832; PMID:2201868;Accession: JU0295
                                                                                                                                                                                                                                                                                                                                                                                                                        ;Title: The complete genome sequence of Escherichia coli K-12;Reference number: A64720; MUID:97426617; PMID:9278503;Accession: D65112
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/Species: Sulfolobus solfataricus
/pate: 24-May-2001 #sequence_revision 24-May-2001 #text_change
                                                                                                                                                             Residues: 1-468,'TG',469-776 <IUC>
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;Residues: 1-62 <KUR>
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                                                                                                                                                                                                                                                                                                                                                                                  Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                     Status: preliminary; nucleic acid sequence not shown; translation not
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               42.3%;
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                                                                                                                                                             NID:g40950; PIDN:CAA37397.1; PID:g40951
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Pred. No. 1.1;
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Pred. No. 0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    G.; Awayez, M.J.; Cha
hi-Ngoc, H.P.; Redder,
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RESULT
A91140
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DNA Res. 8, 11-22, 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                C; Superfamily:
                                                                                                            A;Cross-references: GB:AE005174; NID:g12517831; PIDN:AAG58344.1; A;Experimental source: strain O157:H7, substrain EDL933
                                                                                                                                          A; Molecule type: DNA
A; Residues: 1-778 <STO>
                                                                                                                                                                           A; Status: preliminary
                                                                                                                                                                                          A; Accession: D85985
                                                                                                                                                                                                          A; Reference number:
                                                                                                                                                                                                                       A; Title: Genome sequence
                                                                                                                                                                                                                                      iller, L.; Grotbeck, E.J.; Davis, Nature 409, 529-533, 2001
                                                                                                                                                                                                                                                                     R; Perna, N.T.; Plunkett III, G.; Burland, V.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: DNA
A; Residues: 1-778 <HAY>
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                                                                                                                                                                                                                                                                                                                   Species:
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                                                                                                                                                                                                                                                                                                     Cross-references: GB:BA000007; PIDN:BAB37512.1; PID:
Experimental source: strain O157:H7, substrain RIMD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Status: preliminary
   Matches
                               Query Match
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   Similarity 7; Conser
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             aerobic respiration control sensor protein arcB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Makino, K.; Ohnishi, M.;
Kasunaga, T.; Kuhara, S.;
                                                                aerobic
                                                                                                                                                                                                          A85480;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A99629;
                                                              respiration control sensor
                                                                                                                                                                                                          of enterohemorrhagic Escherichia
80; MUID:21074935; PMID:11206551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequence of enterohemorrhagic Escherichia coli O157:H7
29; MUID:21156231; PMID:11258796
                  41.5%;
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Score 54; DB
Pred. No. 14;
6; Mismatches
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Pred. No.
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Pred. No. 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein [imported] -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kurokawa, K
Shiba, T.;
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                                                                                                                                                                                                                                                     u, B.; Glasner,
Dimalanta, E.;
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.; Hattori, N
                                                              protein arcB;
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                               Length 778;
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   Indels
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M.; Shinagawa,
                                                                                                                                                                                                                                                        J.D.; Rose,
Potamousis,
                                                                response regulator homol
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                                                                                                                             GSPDB:GN00145; UWGP:Z45
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 Gaps
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Apodaca,
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WIEEMKEEWRHDVEVLKAWVAK

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | . 12 | 11 | 10 | 9 | 80 | 7 | თ | տ | 4 | ω | 2 | _ | Result No. |
|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------|--------------------|--|--------------------|--------|--------|--------------------|--------|--------------------|---------|---------------|-----------------------|
| 47 | 47 | 47.5 | 47.5 | 47.5 | ٠ | 48 | 48 | 48 | 48.5 | 48.5 | 48.5 | 48.5 | 49 | 49 | 49 | 50 | 51 | 51 | 51 | 51 | 53.5 | 53.5 | 54 | 54 | 54 | 55 | 57.5 | 62 | Score |
| 36.2 | ٥, | ٥. | | 9 | 36.5 | 9 | 6 | 36.9 | 7. | 7. | 7. | J | 37.7 | ~1 | J | œ | 9 | 9 | Φ | S | \mathbf{L} | 41.2 | 41.5 | 41.5 | 41.5 | 42.3 | 44.2 | 47.7 | Query |
| 281 | 262 | 1146 | 1007 | 344 | 299 | 3511 | 584 | 114 | 1210 | 516 | 214 | 213 | 778 | 640 | 493 | . 1145 | 957 | 778 | 570 | 432 | 1538 | 105 | 778 | 778 | 776 | 62 | 111 | 396 | Query Match Length |
| N | N | N | N | N | N | N | N | N | N | ب | N | N | N | N | N | N | N | N | N | N | N | N | N | N | μ. | 2 | N | N | B |
| F85956 | C91111 | B70723 | H72734 | T34835 | A26512 | A59295 | T49320 | T17699 | A83306 | F71341 | AB2157 | S73607 | AG0906 | T08179 | T06031 | A59251 | D70835 | AD0432 | T32743 | A34413 | H70846 | H72708 | D85985 | A91140 | RGECAR | F90177 | T14306 | I58168 | ID |
| probable transposa | hypothetical prote | probable mmpL12 pr | hypothetical prote | probable transfera | carB protein - Str | unconventional myo | related to heterok | arginine-rich prot | hypothetical prote | probable ribose/ga | hypothetical prote | uridine kinase udk | aerobic respiratio | LRG5 protein - Chl | hexokinase homolog | myosin - Acetabula | hypothetical glyci | μ. | hypothetical prote | atrial gland granu | hypothetical glyci | O . | | aerobic respiratio | | hypothetical prote | -rich [| h factor ar | Description |
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ALIGNMENTS

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RESULT 2
T14306
                       A;Status: preliminary; translated from GB/EMBL/DDBJA;Molecule type: mRNAA;Residues: 1-111 <LIN>
                                                                                                                                                R;Lin, X.; Hwang, G.J.; Zimmerman, J.L. submitted to the EMBL Data Library, January 1996 A;Description: Isolation and characterization of a diverse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: EMBL:U19866; NID:g644828; PIDN:AAA68695.1; PID:g644829
R;Link, W.; Konietzko, U.; Kauselmann, G.; Krug, M.; Schwanke, B.; Frey, U.; Kuhl, D.
Proc. Natl. Acad. Sci. U.S.A. 92, 5734-5738, 1995
A;Title: Somatodendritic expression of an immediate early gene is regulated by synaptic A;Reference number: 159386; MUID:95296386; PMID:7777577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              growth factor arg3.1 - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 26-Jul-1996 #sequence_revision 26-Jul-1996 #text_change 04-Mar-2000
                                                                                                   A; Reference number: Z17968
A; Accession: T14306
                                                                                                                                                                                                                            C; Date: 20-Sep-1999
C; Accession: T14306
                                                                                                                                                                                                                                                                             glycine-rich protein - carrot (fragment)
C;Species: Daucus carota (carrot)
                                                                                                                                                                                                                                                                                                                                                                                                                                     당. 정
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C;Genetics:
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A; Cross-references:
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A; Residues: 1-208, 'V',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: mRNA
A; Residues: 1-396 < RES>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R;Lyford, G.L.; Yamagata, K.; Kaufmann, W.E.; Barnes, C.A.; Sanders, L.K.; Copeland, N.(Neuron 14, 433-445, 1995
A;Cross-references: EMBL:U47097; NID:g1276970; PID:g1276971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C; Superfamily: rat growth factor arg3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Accession:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Accession: I58168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Reference number:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Title: Arc, a growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                107 RWVKREMHVWREVFYRLERWADR 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 RWVRRVRRVWRRVVRVVRRWVRR 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                 #sequence_revision 20-Sep-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /',210-396 <RE2>
EMBL:246925; NID:g854413; PIDN:CAA87033.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          I58168;
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168; MUID:95161073; PMID:7857651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    47.7%; Score 62; DB
47.8%; Pred. No. 0.7,
tive 2; Mismatches
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0.7;
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US-08-093-453B-2
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US-08-093-453B-2
Query Match 59.0
Best Local Similarity 77.8
Matches 7; Conservative
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NUMBER OF SEQ ID NOS: 14
SOFTWARE: PATENTIN Ver. 2.0
SEQ ID NO 7
LENGTH: 1244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 2, Application US/08093453B Patent No. 5439814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 59.0%;
Best Local Similarity 50.0%;
Matches 6; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Rattus rattus -09-356-952-7
                                                                                                                                                                                                                                                     TELEFAX: 404 8T8-3799
INFORMATION FOR SEQ ID NO: 2.
SEQUENCE CHARACTERISTICS:
LENGTH: 2205 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tent No.
                                                                                    FRAGMENT TYPE: N_terminal ORIGINAL SOURCE:
ORGANISM: Rubella virus STRAIN: Therien
                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: 07
TELECOMMUNICATION INFORMATION:
TELEPHONE: 404_818_3700
                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: U.S. 07/722,334
FILING DATE: 28 JUN 1991
ATTORNEY/AGENT INFORMATION:
NAME: Greene, Jamie L.
REGISTRATION NUMBER: 32,467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Frey, Teryl K.
APPLICANT: Dominguez, Geraldina
APPLICANT: Wang, Chin Yen
TITLE OF INVENTION: Modified Infectious Rubella Virus
                                                                                                                                                       HYPOTHETICAL: NO ANTI-SENSE: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OPERATING SYSTEM: 7.0
SOFTWARE: Microsoft Word
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: Jamie L. Greene, Jones & Askew STREET: 191 Peachtree Street, 37th Floor
                                                                                                                                                                                       MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM: MEDIUM TYPE: Diskette,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES:
                                                                                                                                                                                                       STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                         TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/0 FILING DATE: 19 JUL 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 30303
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                                                                                                                                                                       : peptide
NO
                 59.0%;
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 Score 36; DB 1;
Pred. No. 1.1e+03;
0; Mismatches 2
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Pred. No. 6.5e+02;
   2; Indels
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                                 Length 2205
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                                                                                                                                              ORGANISM: Streptomyces venezuelae
FEATURE:
INAME/KEY: 251
LOCATION: unsure
OTHER INFORMATION: unsure of amino acid at this position
US-09-320-878-6
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                                                                       Best Loc
Matches
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LENGTH: 379
                                                                                                          Query Match
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EARLIER APPLICATION NUMBER: CIP OF 08/846,247
EARLIER FILING DATE: 1997-04-30
EARLIER APPLICATION NUMBER: 60/119,139
EARLIER FILING DATE: 1999-02-08
EARLIER APPLICATION NUMBER: 60/100
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/320,878A CURRENT FILING DATE: 1999-05-27 EARLIER APPLICATION NUMBER: CIP OF 09/141,908
                                                                                                                                                                                                                                                                                                                                  EARLIER APPLICATION NUMBER: 60/
EARLIER FILING DATE: 1998-05-28
NUMBER OF SEQ ID NOS: 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: BETLACH, Melanie APPLICANT: BETLACH, Mary C.
                                                                                                                                                                                                                                                                                                                  SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EARLIER FILING DATE: 1998-08-28
EARLIER APPLICATION NUMBER: CIP OF 09/073,538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: McDANIEL, Robert APPLICANT: TANG, Li
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: ASHLEY, Gary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE: 300622002120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: RECOMBINANT NARBONOLIDE POLYKETIDE SYNTHASE
                                                                                                                                                                                                                                                              TYPE: PRT
                                                                       Local Similarity 50.
364 RVIDAVREWAER 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  103 VARVERRWV 111
                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1999-02-08
APPLICATION NUMBER: 60/100,880
FILING DATE: 1998-09-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION:
                                  1 RVVRVVRRWVRR 12
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                                                                                      Score 35;
Pred. No.
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                                                                                      2.9e+02;
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Search completed: June 9, 2003, 12:05:08 Job time: 5.08511 secs

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Matches 7; Conserv
                                             Query Match
Best Nocal
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                                Matches
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PRIOR FILING DATE: 1997-07-31
NUMBER OF SEQ ID NOS: 27
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                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR92/04827
APPLICATION NUMBER: FR92/04827
ATTORNEY/AGENT INFORMATION:
NAME: Smith, Julie K.
REGISTRATION NUMBER: P-38,619
REFERENCE/DOCKET NUMBER: ST92033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Schwei
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MEDIUM TYPE: Floppy disk
COMPUTER: Macintosh
OPERATING SYSTEM: System 7
SOFTWARE: Word 5.1 (EPO Pe
CURRENT APPLICATION DATA:
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ORGANISM: Rattus norvegicus
                                                                                                                                                                 TELEFAX: (610) 454-38
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tent No.
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                                                                                                                                                      SEQUENCE CHARACTERISTICS:
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                             Nocal Similarity hes 6; Conserv
                                                                                                                       TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/08/318,831 FILING DATE: 19 October 1994 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: Collegeville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
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1 RVVRVVRRWVRR 12
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500 Arcola Road, 3C43
                                                                                                                                                                 (610) 454-3808
(610) 454-3808
77 77 NO: 3:
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                                                                                                                                                                                                                                                                                                                                                                                                                     System 7.1
                                             59.0%;
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                                                                                                                                                                                                                                  P-38,619
R: ST92033-US
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Pred. No. 2.9e+02;
                                           Score 36; DB 1;
Pred. No. 3.6e+02;
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                                                           Length 666;
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APPLICANT: Margarit, S. M.
APPLICANT: Bor-Sogi, Dafia
APPLICANT: Cole, Philip
APPLICANT: Kuriyan, John
TITLE OF INVENTION: A CRYSTAL OF A RAS-SOS CO
TITLE OF INVENTION: THEREOF
FILE REFERENCE: 600-1-228N
CURRENT APPLICATION NUMBER: US/09/356,952
CURRENT FILING DATE: 1999-07-19
EARLIER APPLICATION NUMBER: 60/093,631
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Best Local Similarity
                                                                                                                                                                                                                Sequence 7, Application US/09356952 Patent No. 6117663
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OPERATING SYSTEM: System 7.1
SOFTWARE: Word 5.1 (EPO Patentin)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/318,831
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ATTORNEY/AGENT INFORMATION:
NAME: Smith, Julie K.
REGISTRATION NUMBER: P-38
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR92/04827
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MEDIUM TYPE: Floppy disk
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TELECOMMUNICATION INFORMATION:
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0 Arcola Road, 3C43
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Pred. No.
                                                                                           COMPLEX AND METHODS
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US-09-134-001C-5395
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US-09-134-001C-5395
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: TYPE: PRT
: ORGANISM: Helicobacter pylori
US-09-092-315-5
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Query Match
                                                                                                            SEQ ID NO 5395
                                                                                                                                                                                                                                                                                                                                             Sequence 5395, Application US/09134001C Patent No. 6380370
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                                                                                                                                                                                                          APPLICANT: LYNN DOUCETTE-Stamm et al TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO STAPHYLOCOCCUS TITLE OF INVENTION: EPIDERMIDIS FOR DIAGNOSTICS AND THERAPEUTICS FILE REFERENCE: GTC-007
CURRENT APPLICATION NUMBER: US/09/134,001C
CURRENT FILING DATE: 1998-08-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Helicobacter pylori
-09-092-315-7
                                                                                                                                          PRIOR APPLICATION NUMBER: US 60/064,964
PRIOR FILING DATE: 1997-11-08
PRIOR APPLICATION NUMBER: US 60/055,779
PRIOR FILING DATE: 1997-08-14
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CURRENT APPLICATION NUMBER: US/09/092,315
CURRENT FILING DATE: 1998-06-05
EARLIER APPLICATION NUMBER: US 60/048,857
                                                                                                                           NUMBER OF SEQ ID NOS: 5674
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APPLICANT: Ge, Zhongming
TITLE OF INVENTION: ALPHA-1, 3-FUCOSYLTRANFERASE
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EARLIER APPLICATION NUMBER: US 60/048,857
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NUMBER OF SEQ ID NOS: 22
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SOFTWARE: FastSEQ for Windows Version 3.0
                                                TYPE: PRT
ORGANISM: Staphylococcus
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                                                                                       LENGTH: 193
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60.7%;
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Score 37;
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Pred. No. 95;
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Pred. No. 94;
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Length 193;
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US-09-126-420A-24
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                                                                                                    GENERAL INFORMATION:
                                                                                                                   Sequence 24, Application US/09126420A Patent No. 6376753
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Matches 6; Conserv
                            APPLICANT:
                                                                       APPLICANT:
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   TITLE OF INVENTION:
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PRIOR APPLICATION NUMBER: FR92
FILING DATE: 21-APR-1992
                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 489 amino acid
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REFERENCE/DOCKET NUMBER: ST
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
NAME: Smith, Julie K.
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nes 6; Conserv
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OPERATING SYSTEM: S
SOFTWARE: Word 5.1
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                                                                                                                                                                                                        169 RVLNVLRHWVSK 180
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                INVENTION:
                                                                                                                                                                                                                                                                                                                                                       : 489 amino acids amino acid
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                            ROBINEAU, TIBURCE
DURST, FRANCIS
WERCK-REICHART, DANIELE
DIDIERJEAN, LUC
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                                                                                        BATARD, YANNICK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          500 Arcola Road,
                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                    (610)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              USA
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0 Arcola Road, 3C43
                                                                                                                                                                                                                                                                                                                                                                                                                              (610) 454-3839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19 October 1994
                                                                                                                                                                                                                                                                                                                                                                                                                  454-3808
PURIFIED CYTOCHORME P450 CYP76B1 FROM HELIANTHUS TUBEROSUS AND ITS APPLICATIONS AS BIOCATALYST IN
                                                                                                                                                                                                                                                                               50.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     System 7.1
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Mismatches
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CURRENT APPLICATION DATA:

MEDIUM TYPE: COMPUTER: I

OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: PatentIn Release #1.0, Version #1.25

IBM PC compatible SYSTEM: PC-DOS/MS-DOS

Floppy disk

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PCT-US94-01238-48
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Best Local Similarity 60.0%;
Matches 6; Conservative
                                                   Best Local Similarity
Matches' 6; Conserv
                                                                                  Query Match
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                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/077,797

PRIOR APPLICATION DATA:

APPLICATION DATA:

APPLICATION NUMBER: US 08/012,566

PRIOR APPLICATION NUMBER: US 08/012,566

PRILING DATE: 02-FEB-1993

INFORMATION FOR SEQ ID NO: 48:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: 619-554-6312 INFORMATION FOR SEQ ID NO:
                                                                                                                                     TOPOLOGY: linear MOLECULE TYPE: protein FRAGMENT TYPE: internal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 435
PRIOR APPLICATION UNDER: US 08/012,566
PILLING DATE: 02-FEB-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: PatentIn Release #1.0, V
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US94/01238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 16 amino acide
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REFERENCE/DOCKET NUMBER: SCR1276P
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 16 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: FRAGMENT TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
                                                                                                                                                                                   TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                      MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: amino acids
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY:
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2 VVRVVRRWVR 11
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                                                    Conservative
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                                                                  63.9%;
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                                                                  Score 39; DB 5; Pred. No. 3.7;
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Pred. No. 3
                                                    Mismatches
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US-09-092-315-1
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US-09-092-315-1
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APPLICANT: Taylor, Diane E.
APPLICANT: Ge, Zhongming
APPLICANT: Ge, Zhongming
TITLE OF INVENTION: ALPHA-1, 3-FUCOSYLTRANFERASE
FILE REFERENCE: 07254/049001
CURRENT APPLICATION NUMBER: US/09/092,315
CURRENT FILING DATE: 1998-06-05
EARLIER APPLICATION NUMBER: US 60/048,857
EARLIER FILING DATE: 1997-06-06
                                                                                     Sequence 5, Application US/09092315
Patent No. 6399337
GENERAL INFORMATION:
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APPLICANT: Taylor, Diane E.
APPLICANT: Ge, Zhongming
TITLE OF INVENTION: ALPHA-1, 3-FUCOSYLTRANFERASE
FILE REFERENCE: 07254/049001
CURRENT APPLICATION NUMBER: US/09/092,315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILE REFERENCE: 07254/049001
CURRENT APPLICATION NUMBER: US/09/092,315
CURRENT FILLING DATE: 1998-06-05
EARLIER APPLICATION NUMBER: US 60/048,857
EARLIER FILLING DATE: 1997-06-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Taylor, Diane E. APPLICANT: Ge, Zhongming TITLE OF INVENTION: ALPHA-1,
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SOFTWARE: FastSEQ for Windows Version 3.0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: Helicobacter pylori
                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
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451 LLRAIRRWVKK 461
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45.5%;
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Pred. No.
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Pred. No. 92;
5; Mismatches
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Result
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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  Pred. No. is the number of results predicted by chance to have score greater than or equal to the score of the result being pa
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Issued_Patents_AA:*
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PcTUS_COMB.pep:*
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GenCore version 5.1.6 (c) 1993 - 2003 Compugen Ltd
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          US-09-092-315-3
US-09-092-315-5
US-09-092-315-7
US-09-092-315-7
US-09-134-001C-5395
US-09-126-420A-24
US-09-126-420A-24
US-09-126-952-7
US-09-356-952-7
US-09-356-952-7
US-09-105-537-16
US-09-115-537-16
US-09-172-952-15
US-09-172-952-15
US-09-173-16-5
US-09-173-172-952-15
US-09-173-172-952-17
US-08-290-731C-5
US-09-173-5-37-4
US-08-179-132-7
US-08-179-132-188-2
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US-08-077-797A-48
PCT-US94-01238-48
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          Sequence 8, Appli
Sequence 48, Appli
Sequence 3, Appli
Sequence 5, Appli
Sequence 5, Appli
Sequence 7, Appli
Sequence 7, Appli
Sequence 24, Appli
Sequence 27, Appli
Sequence 16, Appli
Sequence 16, Appli
Sequence 16, Appli
Sequence 17, Appli
Sequence 17, Appli
Sequence 18, Appli
Sequence 17, Appli
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Sequence 7, Appli
Sequence 2, Appli
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US-08-077-797A-48
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US-09-092-315-8
                                                                                                                                                                                                                Sequence 48, Applicati
Patent No. 5679548
GENERAL INFORMATION:
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nes 6; Conserv
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| 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 5 | 34 | <u>υ</u> | 32 | .31 | 30 | 29 | 28 |
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| 54.1 | 54.1 | 54.1 | 54.1 | 54.1 | 54.1 | 54.1 | 54.1 | 54.1 | 54.1 | 54.1 | 54.1 | 54.1 | 55.7 | 55.7 | 55.7 | 55.7 | 55.7 |
| 1333 | 1319 | 1297 | 1025 | 1025 | 1025 | 1025 | 1025 | 1025 | 1025 | 423 | 423 | 78 | 498 | 334 | 334 | 334 | 334 |
| ω | Ŋ | ν | σ | տ | 4 | w | ω | N | N | N | N | 4 | 4 | Н | _ | Н | _ |
| US-09-356-952-2 | US-08-290-731C-2 | US-08-290-731C-4 | PCT-US95-04567-4 | PCT-US95-04567-2 | US-09-138-103-2 | US-08-991-942-4 | US-08-991-942-2 | US-08-304-309-4 | US-08-304-309-2 | US-08-290-731C-11 | US-08-290-731C-10 | US-08-905-223-416 | US-09-172-952-26 | US-08-459-174-9 | US-08-460-298-9 | US-08-459-701-9 | US-08-287-442-9 |
| 2, | 'n | Sequence 4, Appli | Sequence 4, Appli | Sequence 2, Appli | Sequence 2, Appli | Sequence 4, Appli | Sequence 2, Appli | Sequence 4, Appli | Sequence 2, Appli | Sequence 11, Appl | Sequence 10, Appl | Sequence 416, App | Sequence 26, Appl | Sequence 9, Appli | Sequence 9, Appli | Sequence 9, Appli | Sequence 9, Appli |
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ALIGNMENTS

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; Sequence 8, Application US/09092315;
Patent No. 6399337;
GENUREL INFORMATION:
APPLICANT: Taylor, Diane E.
APPLICANT: Ge, Zhongming
TITLE OF INVENTION: ALPHA-1, 3-FUCOSYLTRANFE;
FILE REFERENCE: 07254/049001;
CURRENT FILING DATE: 1998-06-05;
EARLIER APPLICATION NUMBER: US 60/048,857;
EARLIER APPLICATION NUMBER: US 60/048,857;
EARLIER FILING DATE: 1997-06-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
SEQ ID NO 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
ORGANISM: Helicobacter
                                                         CORRESPONDENCE ADDRESS:
ADDRESSEE: The Scripps Research Institute, Office of ADDRESSEE: Patent Counsel
STREET: 10666 No. 5679548th Torrey Pines Road, TPC8
CITY: La Jolla
STATE: CA
                                                                                                                                                                                                                                        APPLICANT: Barbas, Carlos F.
APPLICANT: Rosenblum, Jonathan
APPLICANT: Lerner, Richard N.
STATE: CA
COUNTRY: USA
ZIP: 92037
COMPUTER READABLE FORM:
                                                                                                                                                                                   TITLE OF INVENTION: METHODS FOR PRODUCING POLYPEPTIDE METAL TITLE OF INVENTION: BINDING SITES AND COMPOSITIONS THEREOF NUMBER OF SEQUENCES: 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                       444 LLŔŸIŔŔŴŸKK 454
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5679548
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INFORMATION

Application PC/TUS0204812

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NUMBER OF SEQ ID NOS: 12
SOFTWARE: FRSTSEQ for Windows Version 3.0
SEQ ID NO 11
LENGTH: 36
TYPE: PRT
ORGANISM: Artifical sequence
FEATURE: '1
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Matches 12; Conservative
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Best Local Similarity
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO II
LENGTH: 36
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396,0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-PCT / 072396.0223
CURRENT APPLICATION NUMBER: PCT/US02/04812
CURRENT FILING DATE: 2002-02-19
                                                                                                                                CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                  APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396,0217
                                                                                                                                                                                                            APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne
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APPLICANT: Timothy A. Mietzne
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ORGANISM: Artifical sequence
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Pred. No.
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Pred. No. 0.033;
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US-09-785-059-11
Search completed: June 9, 2003, 12:25:29 Job time : 52.9574 Becs
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Best Local Similarity
Matches 12; Conserv
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 11
LENGTH: 36
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                                                                                                                                              Query Match
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                                                                                                                                                                                                                                                                                                          APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
                                                                                                                                                                                                     TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                       OTHER INFORMATION: Artificial peptide derived from HIV-1
                                                                                                                                Local
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12; Conserv
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RVVRVVRRWVRR 18
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Pred. No.
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Pred. No.
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US-09-785-058-10
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                              FILE REFERENCE: A33577 / 072396,0217
CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 10
LENGTH: 24
                                                                                                                                                                                                                     Sequence 10, Application US/09785059 GENERAL INFORMATION:
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 10
LENGTH: 24
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CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 10
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Best Local Similarity
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Best Local :
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A 34001 / 072396.0222
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
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ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Artifical sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
ORGANISM: Artifical sequence
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Conservative (
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ilarity 100.0%;
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Pred. No. 0.022;
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Pred. No. 0.022;
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                                                                                                                    ; OTHER INFORMATION: Artificial PCT-US02-04432-11
                                                                                                                                                                                                                                                                                                                                                                                PCT-US02-04432-11
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LENGTH: 24
TYPE: PRT
ORGANISM: Artificial Sequence
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                                                                                                                                                                                                           SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 11
                                                           Matches
                                                                        Query Match
Best Local Similarity
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Best Local (
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Best Local Similarity
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A34001-PCT / 072396.0223
CURRENT APPLICATION NUMBER: PCT/US02/04432
CURRENT FILING DATE: 2002-02-13
NUMBER OF SEQ ID NOS: 12
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APPLICANT: Timochy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
EILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                              LENGTH: 36
TYPE: PRT
                                                                                                                                                 FEATURE:
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                                                                                                                                                              ORGANISM: Artificial Sequence
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RVVRVVRRWVRR 18
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Pred. No.
                                                                        Score 61; DB 1; Length 36; Pred. No. 0.033;
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Pred. No.
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RESULT 12 PCT-US02-04812-11

PCT-US02-04812-9

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CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOPTWARE: FASESEQ for Windows Version 3.0
SEQ ID NO 9
LENGTH: 12
TYPE: PRT
TYPE: PRT
ORGANISM: Artifical sequence
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PCT-US02-04812-9
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          CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: PastSEQ for Windows Version 3.0
SEQ ID NO 9
LENGTH: 12
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GENERAL INFORMATION:
APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
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Best Local Similarity 100.0%;
Matches 12; Conservative 0
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Best Local
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
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CURRENT APPLICATION NUMBER: PCT/US02/04812
CURRENT FILING DATE: 2002-02-19
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SOFTWARE: FastSEQ for Windows Version 3.0
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
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ORGANISM: Artificial Sequence
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TYPE: PRT
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Pred. No. 0.011;
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Pred. No. 0.011;
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APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PER
FILE REFERENCE: A34001-PCT / 072396.0223
CURRENT APPLICATION NUMBER: PCT/US02/04432
CURRENT FILING DATE: 2002-02-13
NUMBER OF SEQ ID NOS: 12
SOPTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 10
LENGTH: 24
TYPE: PRT
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PCT-US02-04432-10
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GENERAL INFORMATION:
APPLICANT: Ronald C. Montelaro
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LENGTH: 12
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SOFTWARE: FastSEQ for Windows Version
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILB REFERENCE: A34001-A / 072396.0222
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ORGANISM: Artificial Sequence
FEATURE:
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0.011;
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RESULT 7

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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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Match Length
       100.0
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cgn2_6/ptodata/1/paa/US080_COMB.pep:*
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cgn2_6/ptodata/1/paa/US06_
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n2_6/ptodata/1/paa/US082_COMB.pep: *
n2_6/ptodata/1/paa/US082_COMB.pep: *
n2_6/ptodata/1/paa/US084_COMB.pep: *
n2_6/ptodata/1/paa/US085_COMB.pep: *
n2_6/ptodata/1/paa/US085_COMB.pep: *
n2_6/ptodata/1/paa/US087_COMB.pep: *
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n2_6/ptodata/1/paa/US088_COMB.pep: *
n2_6/ptodata/1/paa/US098_COMB.pep: *
n2_6/ptodata/1/paa/US090_COMB.pep: *
n2_6/ptodata/1/paa/US090_COMB.pep: *
n2_6/ptodata/1/paa/US093_COMB.pep: *
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n2_6/ptodata/1/paa/US099_COMB.pep: *
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n2_6/ptodata/1/paa/US099_COMB.pep: *
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    PCT-US02-04432-9
PCT-US02-04812-9
1 US-09-785-058-9
1 US-09-785-059-9
4 US-10-079-075-9
PCT-US02-04432-10
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Sequence 9, Appli
Sequence 10, Appl
                                                                                                                                                                 Description
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| 44 | | 42 | 41 | 40 | 39 | 38 | 37 | 36 | ယ (၁ | 34 | ω (ω | י נכב | ب ر 1 | 200 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | ; = | 10 | Q | 89 | 7 | |
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| US-09-785-059- | -09-785-05 | PCT-US02-04812- | PCT-US02-04432- | US-10-079-075- | US-09-785-059- | US-09-785-058- | PCT-US02-04812- | PCT-US02-04432- | US-10-079-075- | US-09-785-059- | 1 US-09-785-058- | PCT-IIS02-04812- | PCT-IIS02-04432- | US-U9-030 035- | 21 US-09-785-058-5 | PCT-US02-04812- | PCT-US02-04432- | US-10-079-075- | 21 US-09-785-059-4 | US-09-785-058- | 1 PCT-USUZ-0443Z-4 | 4 US-10-079-075- | US-09-785-059- | US-09-785-058- | PCT-US02-04812- | PCT-US02-04432- | -10-079-075- | IIS-09-785-059- | 21 US-09-785-058-11 | PCT-0802-04432 | 4 US-10-079-075- | 1 US-09-785-059- | 1 US-09-785-058- | PCT-US02-04812- | |
| , 0 | 8, Appl | 8, Appli | 8, Appli | e 7, | 7, App] | e 7, | 7 | 7 | 0 | σ. | Sequence 6, App | equence 6. | יי מעלי | י ח | י ה | equence 5, Appli | 5, 2 | Α. | | e . | Sequence 4, Appli | e 12, | 12, App | e 12, | 12, | 12, | | 1 ; | 1 | ;; | e 10, | 10, App | e 1 | Sequence 10, Appl | |

ALIGNMENTS

RESULT 1 PCT-US02-04432-9

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                                                                             Best Loc
Matches
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GENERAL INFORMATION:
APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-PCT / 072396.023
CURRENT APPLICATION NUMBER: PCT/US02/04432
CURRENT FILING DATE: 2002-02-13
                                                                                                                                                                                                                                                         SEQ ID NO 9
LENGTH: 12
                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                               TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                            OTHER INFORMATION: Artificial peptide derived from HIV-1
                                                                                               Local
                                     1 RVVRVVRRWVRR 12
                                                                                             Similarity
                                                                             Conservative
                                                                          100.0%; Score 61; DB 1; Length 12; 100.0%; Pred. No. 0.011; tive 0; Mismatches 0; Indels
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GENERAL INFORMATION:

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RESULT 13
US-09-785-059-4
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; OTHER INFORMATION: artificial peptides derived from HIV-1
US-09-785-058-12
                                                                                                                                                                                                                                                                                                RESULT 14
US-10-079-075-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; ORGANISM: Artifical sequence; FEATURE:
; OTHER INFORMATION: Artificial peptide derived from HIV-1
US-09-785-059-4
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 12
                                                   APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
SOFTWARE: PastSEQ for Windows Version 3.0
SEQ ID NO 4
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 4
LENGTH: 12
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                                                                                                                                                                                                                                    Sequence 4, Application US/10079075 Publication No. US20020188102A1 GENERAL INFORMATION:
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Best Local Similarity
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Best Local Similarity
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                               APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne:
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TYPE: PRT
ORGANISM Artificial Sequence
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Pred. No. 0.22;
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Pred. No. 0.0063;
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Search completed: June 9, Job time : 6.38298 secs
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US-09-785-058-4
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                                                                                                                                                                                            ; OTHER INFORMATION: Artificial peptide derived from HIV-1 US-09-785-058-4
                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
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Publication No. US20030036627A1
                                                                                                                                 Matches
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Best Local (
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GENERAL INFORMATION:
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APPLICANT: Timochy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A 34001 / 072396.0222
                                                                                                                                                                                                                             LENGTH: 12
TYPE: PRI
ORGANISM: Artifical sequence
FEATURE:
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                                                                1 RVVRVVRRVVRR 12
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Pred. No. 0.22
0; Mismatches
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Pred. No. 0.22;
0; Mismatches
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; OTHER INFORMATION: Artificial peptide derived from HIV-1 US-09-785-058-11
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US-09-785-058-11
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; OTHER INFORMATION: Artificial peptide derived from HIV-1
US-10-079-075-11
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Best Local S
Matches 12
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Best Local S
Matches 12
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 11
LENGTH: 36
                                                                                           NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 11
LENGTH: 36
                                                                                                                                                                                                                                                                                       Sequence 11, Application US/09785058 Publication No. US20030036627A1 GENERAL INFORMATION:
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Publication No. US20020188102A1
GENERAL INFORMATION:
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CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FRSESEQ for Windows Version 3.0
SEQ ID NO 11
LENGTH: 36
                                                                                                                                                                   APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396,0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
ORGANISM: Artifical
                                    ORGANISM: Artifical sequence FEATURE:
                                                                          TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Artificial Sequence
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l Similarity 100.0%;
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100.0%; Pred. No.
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Pred. No. 0.0048;
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RESULT 12 US-09-785-058-12

Sequence 12, Application US/09785058 Publication No. US20030036627A1

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US-10-079-075-12
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US-09-785-059-12
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                                                                                                                                    US-10-079-075-12
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                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 12.
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 12
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SOFTWARE: FRATSEQ for Windows Version 3.0
SEQ ID NO 12
LENGTH: 48
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                                                                                 Query Match
Best Local (
                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 12, Application US/10079075 Publication No. US20020188102A1
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A33577 / 072296.0217
                                                                                                                                                                                                                                                                                         CURRENT FILING DATE: 2002-02-19
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CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                LENGTH: 48
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
ORGANISM: Artifical sequence
FEATURE:
                                                                                                                                                  OTHER INFORMATION: artificial peptides derived from HIV-1
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Similarity 100.0%; Pred. No. 0.0063;
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                                                                   Conservative
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ilarity 100.0%; Pred. No. 0.0
Conservative 0; Mismatches
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RESULT 3
US-09-785-058-9
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; OTHER INFORMATION: Artificial
US-09-785-059-10
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US-09-785-059-10
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; OTHER INFORMATION: Artificial peptide derived
US-10-079-075-9
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US-09-785-058-9 .
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Best Local S
Matches 12
                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 10
LENGTH: 24
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 9
                                                                                                                                                                                                                                                                                                                               Sequence 10, Application US/09785059 Patent No. US20020169279A1
                                    Query Match
Best Local Similarity
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396,0217
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                                                                                                                             ORGANISM: Artifical sequence
                                                                                                                                            TYPE: PRT
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ORGANISM: Artificial Sequence
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Pred. No. 0.0032;
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Pred. No. 0.0017;
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Pred. No. 0.0017;
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US-10-079-075-10
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Best Local (
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LENGTH: 24
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Publication No.
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APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                               ORGANISM: Artifical sequence
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                                                    INFORMATION:
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SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 10
LENGTH: 24
TYPE: PRT
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
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SOFTWARE: FastSEQ for Windows Version 3.0
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                                                                                                                                                APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne
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ORGANISM: Artificial Sequence
                                                                                FEATURE: OTHER INFORMATION: Artificial peptide derived
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Listing first 45 summaries
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       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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Copyright (c) 1993 - 2003 Compugen Ltd.
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194.092 Million cell updates/sec
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CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 9
LENGTH: 12
TYPE: PRT
ORGANISM: Artifical sequence
FEATURE:
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US-10-079-075-9
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                                                                                                                                                                                                                                                                                                                                       ; OTHER INFORMATION: Artificial peptide derived from HIV-1 US-09-785-059-9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 9, Application US/09785059
Patent No. US20020169279A1
                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
                                                                                                                                                                                                                                                                                             Local
                                                                                                                                                                                                                                                                             12;
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| 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | | | | 34 | | | | | | | | 26 | | | | | 21 | 20 |
|------------|------------|-------------|-------------------|-------------------|------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-----------------|-------------------|-----------------|---------------------|------------------|-----------------|-----------------|-------------------|----------|----------|------------|-----------------|-------------------|-------------------|
| 38 | 38 | 38 | 38 | 39 | 39 | 39 | 9 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 40 | 43 | 43 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 |
| | | | | ٠ | | 63.9 | 63.9 | | | | | | | 63.9 | | | | | 77.0 | | | | | 77.0 | 77.0 |
| 143 | 143 | 143 | 143 | 501 | 479 | 478 | 476 | 476 | 464 | 440 | 440 | 31 | 31 | 31 | 46 | 454 | 454 | 48 | 48 | 48 | 42 | 42 | | 36 | |
| 9 | 9 | 9 | 9 | 10 | 10 | 9 | 10 | ø. | 9 | 10 | 9 | 9 | 9 | 9 | 10 | | | | | 9 | 9 | 9 | 9 | 9 | 9 |
| 10-173-706 | 10-175-737 | 10-176-758- | US-10-174-590-340 | US-09-733-524-1 | US-09-733-524-17 | US-10-120-319-7 | US-09-733-524-15 | US-10-120-319-5 | US-10-120-319-1 | US-09-733-524-3 | US-10-120-319-3 | US-09-785-058-3 | US-10-079-075-3 | US-09-785-059-3 | US-09-864-761-48882 | US-09-733-524-18 | US-10-120-319-8 | US-09-785-058-8 | US-10-079-075-8 | -785-059 | -785-058 | 0-079-075- | US-09-785-059-7 | US-09-785-058-6 | US-10-079-075-6 |
| 340, | | 340, | 340, | Sequence 1, Appli | e 17, | Sequence 7, Appli | Sequence 15, Appl | Sequence 5, Appli | Sequence 1, Appli | е 3, | ω | ω | Sequence 3, Appli | ω, | 4888 | e 18 | 8, | • | Sequence 8, Appli | 8 | • | e 7, | 7, | Sequence 6, Appli | Sequence 6, Appli |

ALIGNMENTS

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Sequence 9, Application US/10079075
Publication No. US20020188102A1
GENERAL INFORMATION:
APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                                                                                                                           1 RVVRVVRRWVRR 12
                                                                                                                                                                                                                                                         1 RVVRVVRRWVRR 12
                                                                                                                                                                                                                                                                                                                                              h 100.0%;
Similarity 100.0%;
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Pred. No.
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       detecting binding -
                                                                                                                                 Alzheimer's disease; Down's Syndrome; myotonic dystrophy; neuronal; Huntington's disease; multiple sclerosis; alcoholic liver disease; disease; multiple sclerosis; alcoholic liver disease; multiple sclerosis; alcoholic liver disease; biquittin B; apolipoprotein E; MAP2; neurofilament-L; neurofilament-M; neurofilament-F; presenilin I; presenilin I; cellular tumour antigen; glial fibrillary acidic protein; GFAP; p53; semaphorin III; HUPF-1; bcl-2; B-cell leukemia/lymphoma 2 proto-oncogene; HWGP-C; NSP-A; high mobility group protein-C; neuroendocrine specific protein A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention relates to a method for assaying an analyte in a sample comprising: contacting the sample with a mutant analyte-binding enzyme which has binding affinity for the analyte or an immediate analyte enzymatic conversion product but has attenuated catalytic activity; and detecting resulting binding. The method is useful in monitoring biological systems/processes, or prognosis/diagnosis of disease caused by imbalances of the analytes. The present sequence is a
           02-APR-1998;
                                        15-0CT-1998.
                                                                 WO9845322-A2
                                                                                                             Synthetic
                                                                                                                                                                                                                                               Human; beta-amyloid precursor protein; beta-APP; diagnosis; cancer; frameshift mutation; age-related disease; neurodegenerative disorder;
                                                                                                                                                                                                                                                                                                                                                                           AAY20593 standard; Protein; 31 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        peptide used in the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Page 133; 187pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2001-071583/08
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06-DEC-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unidentified.
                                                                                                                                                                                                                                                                                        Human neurofilament-L mutant protein fragment 100.
                                                                                                                                                                                                                                                                                                                     22-JUL-1999
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                                                                                             sapiens
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                                                                                                                                                                                                                                                                                                                     (first entry)
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99US-0457205.
             98WO-IB00705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  63.9%;
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        diagnosis of disease, analyte-binding enzyme and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22; Length 16;
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Search completed: June 9, 2003, 11:55:35 Job time: 14.9362 secs

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2 VVRVVRRWVRR 12 | | | | | | : | : 12 VWRFVRRWIRQ 22

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CC disease, Down's syndrome, myotonic dystrophy, Huntington's disease, Commultiple sclerosis, alcoholic liver disease, diabetes mellitus type II CC and many others listed) or susceptibility to these disorders. The method callows a definitive diagnosis of Alzheimer's disease in living patients, at an early stage. It is based on the observation that disease may be caused by mutations in RNA rather than DNA. The invention describes the CC used of neuronal system RNA molecules, specifically proteins including CC beta-amyloid precursor protein (beta-APP), the microtubule associated proteins Tau and Big Tau, ubiquitin B, apolipoprotein E, microtubule associated protein 2 (MAP2), neurofilament-H, neurofilament-H, cellular tumour antigen p53, B-cell leukemia/lymphoma CC protein (GFAP), the cellular tumour antigen p53, B-cell leukemia/lymphoma CC (bcl-2) proto-oncogene, semaphorin III, HUPF-1, high mobility group CC protein-C (HWGP-C) and neuroendocrine specific protein A.
                  Query Match
Best Local (
    Matches
                                                                                                                                                                                                                                                                                                                                                                                                       This invention describes a novel method for the diagnosis of a disease caused by, or associated with, an RNA molecule that has a frameshift mutation. The method is used to diagnose age-related diseases, especial cancer and a wide range of neurodegenerative disorders (e.g. Alzheimer'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Diagnosing disease by detecting frameshift mutations in RNA or corresponding protein mutations - used to diagnose cancer and neurological diseases, particularly Alzheimer's disease, and also for treatment and prevention with specific ribozymes or wild-type
                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Figure 7; 258pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1998-609901/51.
N-PSDB; AAX75758.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Burbach JPH,
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(ROYA-) ROYAL NETHERLANDS ACAD ARTS & SCI.
(UYRO-) UNIV ROTTERDAM ERASMUS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10-APR-1997;
Similarity 7; Conserv
                                                                                 31 AA;
    Conservative
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                    63.9%;
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  Score 39; DB Pred. No. 27; 2; Mismatches
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                DB
. 27;
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                                         Length 31;
    Indels
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Gaps
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RESULT 13
AAG78104 ·
ID AAG78
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AAR57952
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Best Local
                                                                                                                                                                                         A human monoclonal antibody capable of immunoreacting with iron (III) chloride has one of the heavy chain variable region amino acid sequences AARS7946-R57953. The binding sequences were generated by mutagenic PCR on the Ig heavy chain gene and were identified by expression on phagemid display proteins.
             AAG78104;
                                                                                                                                                                                                                                                                               Methods using oligo-nucleotide primers in prodn of metal binding sites in CDR regions of immunoglobulin heavy or light-chains - for use therapeutically, diagnostically or as metal ion chelator
                                 AAG78104 standard; Peptide; 16
                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                        02-FEB-1993;
14-JUN-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDR3; complementarity determining region; mutagenesis; metalloantibody; phagemid display library; magnetic antibody.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             useful
                                                                                                                                                                                                                                                         Claim 26; Page 27; 141pp; English.
                                                                                                                                                                                                                                                                                                                           WPI; 1994-279674/34.
                                                                                                                                                                                                                                                                                                                                                                                                                        02-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                             18-AUG-1994.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Metal cation binding site; iron (III) chloride; immunoglobulin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Randomly generated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAR57952 standard; peptide; 16
                                                                                                                                                                                                                                                                                                                                                                    (SCRI ) SCRIPPS RES INST.
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                                                                                                         VVRVVRRWVR 11
                                                                                     VIKWIRRWVR
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93US-0077797.
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70.0%;
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                                                                                                                                       Score 39; DB
Pred. No. 14;
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Pred. No. 4e+02;
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                                                                                                                              Mismatches
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RESULT 14
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Analyte-binding enzyme; analyte analysis.

Metal ion binding sequence #48.

27-APR-2001 AAB66859;

(first

entry)

AAB66859 standard;

Peptide; 16 AA.

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                                                                                                             Best
                                            Matches
                                                                            Query Match
                                                                                                                                                                    base-pairing with a mutant nucleic acid repair enzyme or its complex and detecting the binding between the nucleic acid duplex and mutant enzyme, such that the presence of abnormal base-pairing, mutation or polymorphism is detected. The method is useful for prognosis or diagnosis of the presence or severity of a disease, disorder or infection by a pathological agent associated with the mutation, including cancer, immune system disorders, metabolic disorders, muscle and bone disorders, nervous system disorders, signal disorders and transporter disease or disorder. The method is rapid and accurate and is amenable to high throughput formats. The method requires neither specific probes nor gel electrophoresis and is amendable to automation for simultaneous detection of a large number of nucleic acid mutations. The present
                                                                                                                                                                                                                                                                                                                                                                 The invention relates to detecting abnormal base-pairing in a nucleic acid duplex, mutation in a nucleic acid or polymorphism in a gene locu comprising contacting a nucleic acid duplex having an abnormal
                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Detecting abnormal base-pairing, mutation in nucleic acid, or polymorphism in gene locus, comprises contacting nucleic acid abnormal base-pairing and mutant nucleic acid repair enzyme, detecting their binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     abnormal base-pairing; polymorphism; nucleic acid repair enzyme; mutation; infection; cancer; immune system disorder; metabolic d muscle disorder; bone disorder; nervous system disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic.
                                                                                                                                                          sequence is that of
                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Page 217; 294pp;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Yuan C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-FEB-2000; 2000US-0514016
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                                            Similarity 6; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        screening.
             11
                                                                                                                                                          a metal ion binding peptide sequence, useful to
                                                           63.9%;
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••
                                                           Score 39;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                English.
                                            Mismatches
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                                                                            DB 22;
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RESULT 10
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02-JUN-2000;
07-JUL-2000;
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                                                                                                                                                                                                                                                        Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful treating acne vulgaris -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis; uveitis; endophthalmitis; bone; joint; central nervous system; EIISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay; dermatological; osteopathic; neuroprotectant.
                                                                                                                                                          Example 1; SEQ ID No 28983; 1069pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-PSDB;
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Sequences AAU39105-AAU68017 represent Propionibacterium acnes polypeptides. The proteins and their associated DNA sequences

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RESULT 11
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CC Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO
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The invention relates to identifying target proteins (ABB90790-ABB94016) for herbicidally active compounds, comprising aligning and comparing nucleic acid or amino acid sequences from pla with nucleic acid or amino acid sequences from non-plant organisms us suitable search parameters, where plant sequences having an E-value greater by a factor of 3 than the E-value of most similar non-plant sequences are selected. The polypeptides or nucleic acids encoding that are useful for identifying modulators. The identified modulators.
                                                                                                                                                                                                          Identifying plant target proteins for herbicidally active compounds, comprising aligning and comparing nucleic acid or amino acid sequence from plant with nucleic acid or amino acid sequences from non-plant
                                                                                                                                                                                          organisms
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26-MAY-2000; 2000US-0207456.
30-JUN-2000; 2000US-0608408.
03-AUG-2000; 2000US-0632366.
21-SEP-2000; 2000US-0234687.
27-SEP-2000; 2000US-0234635.
04-OCT-2000; 2000GB-0024263.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  capable of detecting 1000 or more genes from Drosophila. The invention useful in developmental biology and in elucidating cell signalling and cell-cell interactions in higher eukaryotes for the development of insecticides, therapeutics and pharmaceutical drugs. The invention discloses genomic DNA sequences (ABLIG176-ABL30511), expressed DNA sequences (ABL01840-ABL16175) and the encoded proteins

(ABB57737-ABB72072).
                                The present invention relates to single exon nucleic acid probes (SENP: see AAI31315-AAI57546). The present sequence is a peptide encoded by on such probe. The probes are useful for producing a microarray for predicting, measuring and displaying gene expression in samples derived from human placents. The probes are useful for antenatal diagnosis of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published nor sameance.
 Sequence
                       from human placenta.
human genetic disord
                                                                                                                Claim
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             genetic disorder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Probe; microarray;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Peptide #12579 encoded by probe for measuring placental gene expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAM38542 standard; Protein; 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                (MOLE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                       SG,
                                                                                                                27;
                                                                                                                                       genome-derived single exon nucleic acid zing gene expression in human placenta -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            91
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                                                                                                                                                                                                                              MOLECULAR DYNAMICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity 7; Conserv
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                                                                                                                SEQ
                                                                                                                                                                                                     Hanzel
  46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              458 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                占
                                                                                                                                                                                                       DK,
                                                                                                              No 38811;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       67.2%;
                                                                                                                                                                                                     Chen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         placenta; antenatal diagnosis;
                                                                                                                                                                                                       ξ
                                                                                                             654pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 41; DB
Pred. No. 2e+0
1; Mismatches
                                                                                                                                                                                                       Rank
                                                                                                              English
                                                                                                                                      placenta
                                                                                                                                                                                                       뮸
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 22
2e+02;
                                                                                                                                                   probes useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                     for
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                                                                        by one
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RESULT 9
ABP31941
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        Sequences ABP31028-ABP35561 represent 4534 novel human proteins
Cd designated ORF (open reading frame) 1-4534, and sequences ABN75054-
Cd ABN79587 represent cDNAs encoding them. The invention also encompasses
Cd polypeptides at least 80% identical to the ORF1-ORF4534 (collectively
Cd referred to as ORFX) proteins, polynuclectides at least 85% identical to
Cd the ORFX nucleic acid sequences, vectors and host cells comprising ORFX
Cd colynucleotides, the recombinant production of ORFX proteins, antibodies
Cd specific for ORFX proteins, methods of detecting ORFX proteins, antibodies
Cd specific for ORFX proteins, methods of detecting ORFX proteins and
Cd specific for ORFX proteins, methods of detecting ORFX expression or
Cd cativity, and methods of screening individuals for a predisposition to an
Cd cativity, and methods of screening individuals for a predisposition to an
Cd cativity, and methods of screening individuals for a predisposition of
Cd cativity, and methods of screening individuals for a predisposition of
Cd cativity, and methods of screening individuals for a predisposition of
Cd cativity, and methods of screening individuals for a predisposition of
Cd cativity, and methods of screening individuals for a predisposition,
Cd clidifferentiation, immune modulation, haematopoiesis regulation,
Cd tissue growth, angiogenesis, activin or inhibin activity, chemotactic/
C recentralication and antifully inflammatory activity, thumbur inhibition activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         thrombolytic; tumour inhibition; bodily characteristic; fertility; behaviour; cancer; proliferative disorder; neurological disorder; cardiovascular disease; immune system disorder; organ transplantation; cissue growth disorder; tissue regeneration disorder; diabetes mellitus; hypothyroidism; cholesterol ester storage disease; infection; vulnerary; vasotropic; antipsoriatic; antidiabetic; cytostatic; nootropic; neuroprotective; antiatherosclerotic; anticoagulant; thrombolytic; cardiant; hypotensive; antithyroid; antiinflammatory; immunomodulator;
                                                                                                                                                                                                                                                                                                                                                                                                              Novel human polypeptides and polynucleotides useful for diagnosing, preventing and treating cardiovascular disease, neurodegenerative, hyperproliferative disorders and disorders related to organ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   disease monitoring; cytokine; cell proliferation; cell differentiation; immune modulation; haematopoiesis regulation; tissue growth; angiogenesis; activin; inhibin; chemotactic; chemokinetic; haemostatic; thrombolytic; tumour inhibition; bodily characteristic; fertility;
                                                                                                                                                                                                                                                                                                                                                        Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2002-106200/14.
N-PSDB; ABN75967.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24-MAY-2000; 2000US-206690P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24-MAY-2001; 2001WO-US17076
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        dermatological; analgesic; virucide; antibacterial; fungicide
                                                                                                                                                                                                                                                                                                                                                                                               transplantation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Leach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200190366-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; ORF;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABP31941;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABP31941 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (CURA-) CURAGEN CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                        10;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               l Similarity
7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VVRVVRRWVRR
                                                                                                                                                                                                                                                                                                                                                    Page 721;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Shimkets
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             open reading
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein, SEQ ID NO:1828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             entry
                                                                                                                                                                                                                                                                                                                                                    2508pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63.6%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   frame; ORFX; drug screening; diagnosis;
kine; cell proliferation; cell differentiation;
                                                                                                                                                                                                                                                                                                                                                    English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. 28;
?; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 46;
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activity

N-PSDB; AAZ45404 WPI; 2000-105868/09

Disclosure; Page 106-109; 111pp; English

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RESULT 6
AAB62653
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present sequence represents splice variant MTL-R1B of the motilin CC receptor. The gene encodes a G-protein coupled receptor, and is designated MTL-R1 (also GPR38). Two spliced forms of GPR38 exist, CC MTL-R1A (see AAY54145) and MTL-R1B (see AAY54146). MTL-R1A is a functional seven transmembrane domain form, and MTL-R1B is a truncated five transmembrane domain, The MTL-R1 proteins are used to identify agonists and antagonists which can be used for treating gastric motility disorders, functional defects, disorders secondary to neurological disorders, functional defects, disorders secondary to neurological disorders, gastroparesis, paraneoplastic syndromes radiation induced dysmotility, diabetes, infections, stress-related motility disorders, psychgenic disorders, gastroparesis, gastro-oesophageal reflux disease, constipation, chronic idiopathis pseudo obstruction, acute faccal impaction, bottoperative ileus, gallstones, infantile collic, irritable bowel syndrome, non-ulcer dyspepsion, non-cardiac chest pain and diarrhoea. They can also be used in the preparation for colonoscopy,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                          zsig33; signal transduction; hormone; enzyme; neural development; gastric contractility; nutrient uptake; digestive; pancreatic; human; insulin-like growth factor-I; growth hormone; bone; gastrointestinal; glucose; osteopathic; anorectic; vulnerary; immunomodulator; GHS-R; G-protein coupled receptor; motilin receptor; GPR38; GPR-38B; isoform
         Forming reversible peptide receptor complex for purifying cell and peptides, stimulating signal transduction and modulating hormone secretion, involves contacting a receptor with zsig33 polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                 N-PSDB; AAF83684.
                                                                                                                                    Sheppard
                                                                                                                                                                                                                                        22-NOV-2000; 2000WO-US32074.
                                                                                                                                                                                                                                                                          31-MAY-2001
                                                                                                                                                                                                                                                                                                            WO200138355-A2
                                                                                                                                                                                                                                                                                                                                             Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Short form of motilin receptor, GPR-38B isoform.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23-JUL-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAB62653 standard; Protein; 386 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel receptor protein for screening irritable bowel syndrome, constipation
                                                                                                                                                                      (ZYMO ) ZYMOGENETICS INC.
                                                                                                   2001-355879/37.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              295 QTVRVLRKWSRR 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 RVVRVVRRWVRR 12
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7; Conserve
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O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and duodenal intubation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        386 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                    Jaspers
                                                                                                                                                                                                         99US-0166765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   67.2%;
                                                                                                                                    SR,
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                                                                                                                                  Deisher TA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 41; DB Z1; Pred. No. 1.7e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        compounds used in treating on and other gastric conditions
                                                                                                                                  Bishop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 386
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RESULT 7
ABB64714
ID ABB6
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PRINCE XXX PRINCE FOR A PRINCE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
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receptor complex that involves providing an immobilized receptor, a
contacting the receptor with a zsig33 peptide (comprising residues
of AAB62649), where the receptor binds to the zsig33 peptide. The m
                                                                                     New isolated nucleic acid genes from Drosophila and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                     WPI; 2001-656860/75.
N-PSDB; ABL08817.
                                                                                                                                                                                                                                                                                                                                                                                                                   23-MAR-2000; 2000US-191637P
11-JUL-2000; 2000US-0614150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Drosophila; developmental biology; cell signalling; insecticide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Drosophila melanogaster polypeptide SEQ ID NO 20934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABB64714;
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                                                                                                                                                                                                                                                                                    Venter JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23-MAR-2001; 2001WO-US09231
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      pharmaceutical.
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                                                                                                                                                                                                                                                                                                                                                         CORP NY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          386 AA;
                                                                                                                                                                                                                                                                                        Adams M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          58.3%;
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                                                                                                                                                                                                                                                                                    , DWG
                                                                                        detection reagent for detecting 1000 or more for elucidating cell signalling and cell-cell
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Pred. No.
                                                                                                                                                                                                                                                                                        Myers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 22;
1.7e+02;
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Disclosure; SEQ ID NO 20934; 21pp + Sequence Listing; English

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RESULT 4
AAG65539
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CC and to produce other types of data and products dependent on DNA and composities and no acid sequences of the invention.

CC specification, but was obtained in electronic format directly from WIPO cat ftp.wipo.int/pub/published_pct_sequences.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                          Novel peptides having antimicrobial activity have positive charge to selectively disrupt microbial membranes, assume beta sheet structure membrane environment and are substantially amphipathic in beta sheet
                                                                                                                     WPI;
                                                                                                                                                        Blazyk JF;
                                                                                                                                                                                                                              15-FEB-2000; 2000US-0182495.
                                                                                                                                                                                                                                                                 15-FEB-2001; 2001WO-US04822
                                                                                                                                                                                                                                                                                                    23-AUG-2001
                                                                                                                                                                                                                                                                                                                                     WO200160162-A2
                                                                                                                                                                                                                                                                                                                                                                                                         Antimicrobial; microbial membrane disrupter; gene therapy; pathogen; spermicide; imaging; magainin; PGla.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAG65539;
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                                                                                                                                                                                             (UYOH-) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Peptide sequence used in the course of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAG65539 standard; peptide; 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 20; SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity nes 6; Conserv
                                                                                                                       2001-565322/63.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             36
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       201 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                             OIHO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            relates to isolated polynucleotide (I) and II) sequences. (I) is useful as hybridisation probes,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 48268; 103pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  72.1%;
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Pred. No. 32;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22;
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                                                                  in
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Example 102; Page 84; 119pp; English

Feighner SD, I Pong S, Smith

Patchett AA,

Tan

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McKee K,

MacNeil D,

Howard

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AAY54146
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cc has a detectable membrane disrupting activity against a pathogen, and is cuseful for inhibiting non-microbial pathogenic activity also. (I) is also cuseful for killing human sperm. The peptides are also provided in the cform of an expression vector comprising a nucleic acid encoding the compides. The peptides are useful for inhibiting the activity of competitions and other microbial pathogens such as algae, fungi or protozoa and for inhibiting non-microbial pathogens such as worms or arthropods, and as spermicides for humans as the sperm membrane is atypical of human ccell membranes. (I) also has diagnostic uses e.g., in localizing an accell membrane is also has diagnostic uses e.g., in localizing an accell membrane analysis of analytes in in vitro sample, and for in vivo imaging. Also, they are useful as molecular weight markers, as mutrient source, as growth medium component for culturing microorganisms, as well as a food ingredient for human consumption. The peptides have a greater selectivity for bacterial versus mammalian lipids as compared to the component of applieds. Sequences AAG65536-47 represent amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 6
                                                                                                                                                                                                                                                                                                                               gastroparesis; gastro-oesophageal reflux disease; constipation chronic idiopathis pseudo obstruction; acute faecal impaction; postoperative ileus; gallstones; infantile collic; diarrhoea; irritable bowel syndrome; non-ulcer dyspepsion; non-cardiac che
                                                                                                                                                                                                                                                                                                                                                                                                         Motilin receptor; G-protein coupled receptor; MTL-R1; GPR38; spliced form; MTL-R1A; MTL-R1B; gastric motility disorder; functional defect; neurological disorder; scleroderma; colonoscopy; paraneoplastic syndrome; radiation induced dysmotility; diabetes; infection; stress-related motility disorder; psychgenic disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            having 8-50 amino acids, a net charge of 4, a hydrophobic moment (mic as a beta sheet which is 0.2 higher than its micro H as alpha helix, having detectable membrane disrupting activity against a microbial pathogen, and substantially no membrane disrupting activity against mammalian cells. (I) is useful for inhibiting microbial activity. (I)
                                                                                                                                                                                                                                  WO9964436-A1
                                                                                                                                                   08-JUN-1999;
                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Amino acid sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27-MAR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAY54146;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAY54146 standard; Protein; 386
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                          (MERI ) MERCK & CO INC
                                                                                                                                                                                             16-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sequences of antimicrobial peptides.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention provides an antimicrobial compound (I) which is a peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RIIRIIRRIIRR 17
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                                                                                                                                                                                                                                                                                                                 duodenal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                 980S-0089098
                                                                                                                                                       99WO-US12773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of the motilin receptor splice variant MTL-R1B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              68.9%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 42; DB
Pred. No. 5.7;
5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 22; Length 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1;
                                                                                                                                                                                                                                                                                                                                                                                         constipation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                 chest pain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>,</u>
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also
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RESULT 2
AAU41774
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Best Local
                                                                                                                 21-APR-2000;
02-JUN-2000;
07-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     presence or absence of P. acnes in a patient comprises contacting a sample with a binding agent that binds to the proteins of the invention and determining the amount of bound protein in the sample. The polypeptides may be used as antigens in the production of antibodies specific for P. acnes proteins. These antibodies can be used to downregulate expression and activity of P. acnes polypeptides and therefore treat P. acnes infections. The antibodies may also be used as diagnostic agents for determining P. acnes presence, for example, by enzyme libral immunocorbant agents for determining P. acnes presence, for example, by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the treatment, prevention and diagnosis of medical conditions caused by P. acnes. The disorders include SAPHO syndrome (synovitis, acne, pustulosis, hypertosis and osteomyelitis), uveitis and endophthalmitis. P. acnes is also involved in infections of bone, joints and the central nervous system, however it is particularly involved in the inflammatory lesions associated with acne vulgaris. A method for detecting the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         enzyme linked immunosorbent assay (ELISA).

Note: The sequence data for this patent did not form specification, but was obtained in electronic format
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic polypeptides. The proteins and their associated DNA sequences are used in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful treating acne vulgaris -
WPI; 2001-616774/71
                                 L'maisonneuve
                                               Skeiky YAW,
                                                                                                                                                                                                                                                                                                                                                                  SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAU41774 standard; Protein; 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 1; SEQ ID No 10673; 1069pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-PSDB; AAS59545
                                                                                                                                                                                20-APR-2001;
                                                                                                                                                                                                                                                    WO200181581-A2
                                                                                                                                                                                                                                                                                  Propionibacterium acnes.
                                                                                                                                                                                                                                                                                                                                 uveitis; endophthalmitis; bone; joint; central nervous system; ELISA;
inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay;
                                                                                                                                                                                                                                                                                                                                                                                                   Propionibacterium acnes immunogenic protein #2670.
                                                                                  (CORI-) CORIXA CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RVVRVVRRWVRR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RRIRIVRRWVQR 12
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                                             Persing DH,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                  2001WO-US12865.
                                                                                                                 2000US-216747P
                                                                                                                               2000US-199047P.
2000US-208841P.
                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
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                             Mitcham JL, Wang
, Jen S, Carter
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Pred. No. 2.8;
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                                             Wang
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                                               ss,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 66
                                                Bhatia
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                                                                                                                                                                                                                                                cc pustulosis, in pertosis and osteomyelitis), uveitis and endophthalmitis.

Cc P. acnes is also involved in infections of bone, joints and the central cc nervous system, however it is particularly involved in the inflammatory lesions associated with acne vulgaris. A method for detecting the created with a particularly involved in the inflammatory cc lesions associated with a cance in a patient comprises contacting a sample with a binding agent that binds to the proteins of the invention cand determining the amount of bound protein in the sample. The cc polypeptides may be used as antigens in the production of antibodies specific for P. acnes proteins. These antibodies can be used to compregulate expression and activity of P. acnes polypeptides and ctherefore treat P. acnes infections. The antibodies may also be used as chargeneric agents for determining P. acnes presence, for example, by cenzyme linked immunosorbent assay (ELISA).

Cc specification, but was obtained in electronic format directly from WIPO constitutions in the printed specification, but was obtained in electronic format directly from WIPO constitutions.
                                                                                       Query Match
Best Local S
Matches 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic polypeptides. The proteins and their associated DNA sequences are used in the treatment, prevention and diagnosis of medical conditions caused by P. acnes The disorders include SAPHO syndrome (synovitis, acne,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful treating acne vulgaris -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-PSDB; AAS59515
                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 1; SEQ ID No 2969; 1069pp; English
                                                                                                                                                                                                                               ftp.wipo.int/pub/published_pct_sequences.
27
                          1 RVVRVVRRWVRR 12
                                                                                       Similarity
9; Conserv
RVSEVVARWVRR 38
                                                                                                                                                                                   144 AA;
                                                                                         Conservative
                                                                                                               72.1%;
                                                                                       Score 44; DB Pred. No. 23; O; Mismatches
                                                                                                                                     22;
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New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations
                                   N-PSDB; AAS82096.
                                                                                                                  31-MAR-2000; 2000US-0540217.
23-AUG-2000; 2000US-0649167.
                                                                                                                                                                                                                                                Human; chromosome mapping; gene mapping; gene therapy; forensic food supplement; medical imaging; diagnostic; genetic disorder.
                                                WPI; 2001-639362/73
                                                                                                                                                     30-MAR-2001; 2001WO-US08631.
                                                                                                                                                                             11-OCT-2001.
                                                                                                                                                                                                    WO200175067-A2
                                                                                                                                                                                                                                                                                   Novel human diagnostic protein #17900.
                                                                                                                                                                                                                                                                                                             18-FEB-2002
                                                                                                                                                                                                                                                                                                                                    ABG17909;
                                                                                                                                                                                                                                                                                                                                                          ABG17909 standard; Protein; 201
                                                                      Drmanac
                                                                                            (HYSE-) HYSEQ INC.
                                                                     RT,
                                                                     Liu C,
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                                                                     Tang
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Database
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Perfect score:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A Geneseq 101002:*

1: /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1980.DAT:*
2: /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1981.DAT:*
3: /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1982.DAT:*
4: /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1983.DAT:*
5: /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1985.DAT:*
6: /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1985.DAT:*
7: /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1986.DAT:*
9: /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1988.DAT:*
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10: /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1988.DAT:*
11: /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1988.DAT:*
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Copyright (c) 1993 - 2003 Compugen Ltd.
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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| Result No. | Score | Query Match Length DB | Length | : B : | ID | Description |
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| ъ | 48 | | - 1 | 22 | AAU49478 | . Propionibacterium |
| 2 | 44 | 72.1 | 144 | 22 | AAU41774 | Propionibacterium |
| ω | 44 | 72.1 | 201 | 22 | ABG17909 | Novel human diagno |
| 4 | 42 | 68.9 | 18 | 22 | AAG65539 | Peptide sequence u |
| 5 | 41 | 67.2 | 386 | 21 | AAY54146 | Amino acid sequenc |
| 6 | 41 | 67.2 | 386 | 22 | AAB62653 | Short form of moti |
| 7 | 41 | 67.2 | 458 | 22 | ABB64714 | Drosophila melanog |
| 89 | 40 | 65.6 | 46 | 22 | AAM38542 | Peptide #12579 enc |
| 9 | 40 | 65.6 | 64 | 23 | ABP31941 | Human ORF914 prote |
| 10 | 40 | 65.6 | 103 | 22 | AAU67788 | Propionibacterium |
| | | | | | | |

| , <u>4</u> , | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | ω G | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | | | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | | 11 |
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| 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | . 37 | 37 | 37 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 40 |
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| 22 | 22 | 22 | 22 | 21 | 21 | 22 | 22 | 20 | 22 | 22 | 23 | 21 | 20 | 21 | 21 | 22 | 20 | 21 | 21 | 22 | 22 | 21 | 21 | 22 | 22 | 23 | 20 | 22 | 20 | 19 | 22 | 22 | 15 | 23 |
| AAU30918 | AAM3 94 1 7 | AAM39418 | AAM39416 | AAB43982 | AAB12138 | AAB88466 | AAG81335 | AAY36034 | AAU01781 | AAU27640 | ABP40550 | AAG09943 | AAY12551 | AAG36558 | AAG13632 | ABB64409 | AAY05625 | AAG41900 | AAG41901 | AAB66172 | AAU29193 | AAY99423 | AAG41902 | AAM84315 | AAU39112 | AAU99184 | AAW86008 | AAU62267 | AAW89340 | AAY20593 | AAB66859 | AAG78104 | 795 | ABB92719 |
| Novel human secret | Human polypeptide | Human polypeptide | Human polypeptide | Human cancer assoc | Hydrophobic domain | Human membrane or | Human AFP protein | | Human secreted pro | Human protein AFP6 | Staphylococcus epi | Arabidopsis thalia | н | | Arabidopsis thalia | 3 | HIV-1 group O isol | | tha | Protein of the inv | ζĮ | Human PRO1482 (UNQ | Arabidopsis thalia | Human immune/haema | Propionibacterium | Partial human pert | Helicobacter pylor | Propionibacterium | Helicobacter pylor | Human neurofilamen | Metal ion binding | | w | |

ALIGNMENTS

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| 01-NOV-2001. 20-APR-2001; 2001WO-US12865. 21-APR-2000; 2000US-199047P. 02-JUN-2000; 2000US-216747P. 07-JUL-2000; 2000US-216747P. (CORI-) CORIXA CORP. Skeiky YAW, Persing DH, Mitcham JL, Wang SS, Bhatia A; L'maisonneuve J, Zhang Y, Jen S, Carter D; WPI; 2001-616774/71. | Propionibacterium acnes immunogenic protein #10374. SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis; uveitis; endophthalmitis; bone; joint; central nervous system; ELISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay; dermatological; osteopathic; neuroprotectant. Propionibacterium acnes. | RESULT 1 AAU49478 ID AAU49478 standard; Protein; 66 AA. XX AC AAU49478; XX XX AC AAU49478; XX |

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RY "Phylogenetic relationships in Taxodiaceae and Cupressaceae based on RT the matk, chil, trnL-trnF IGS region and trnL intron sequences.";

RI Submitted (JUL-1999) to the EMBL/GenBank/DDBJ databases.

C: -! FUNCTION: PROBABLY ASSISTS IN SPLICING CHLOROPLAST GROUP II

CC INTRONS (BY SIMILARITY)

CC INTRONS (BY SIMILARITY)

CC AND REGIONS OF SIMILARITY TO MATURASE-LIKE POLYPEPTIDES ENCODED BY CC AND REGIONS OF SIMILARITY TO MATURASE-LIKE POLYPEPTIDES ENCODED BY CC MITOCHONDRIAL INTRONS.

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CC MITOCHONDRIAL INTRONS.

CR MID.; ABOJO117; BABO1546.1; -.

DR InterPro; IPR002866; Matk N.

DR Ffam; PF01348; Intron_maturas2; 1.
                                                                                                                                                                                                                                                                                                                                           Query Match 67.2%; Score 41; DB 8; Length 476; Best Local Similarity 60.0%; Pred. No. 77; Matches 6; Conservative 3; Mismatches 1; Indels
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01-OCT-2000
01-OCT-2000
01-MAR-2002
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Chloroplast.
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Coniferopsida; Coniferales; Cupressaceae; Cryptomeria.
NCBI TaxID=99810;
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NON_TER 476 476
SEQUENCE 476 AA; 56792 MW;
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TISSUE=LEAF;
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01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-OCT-2002 (TrEMBLrel. 20, Last annotation update)
Probable intron maturase (Maturase K) (Fragment).
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159 LVRIFRRWIR 168
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Best Local
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Q9MDV0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kusumi J., Tsumura Y., Yoshimaru H., Tachida H.;
"Phylogenetic relationships in Taxodiaceae and Cupressaceae based
the matK. chlL, trnL-trnF IGS region and trnL intron sequences.";
Submitted (JUL-1999) to the EMBL/GenBank/DDBJ databases.
-I- FUNCTION: PROBABLY ASSISTS IN SPLICING CHLOROPLAST GROUP II
                                                                                  Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Coniferopsida; Coniferales; Cupressaceae; Taxodium.
                                                                                                                              Chloroplast.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chloroplast; mRNA processing NON_TER 471 471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -1- SIMILARITY: WITH CORRESPONDING ORF IN OTHER PLANT CHLOROPLASTS, AND REGIONS OF SIMILARITY TO MATURASE-LIKE POLYPEPTIDES ENCODED MITOCHONDRIAL INTRONS.

EMBL; AB030118; BAB01547.1; -.
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01-OCT-2000 (TrEMBLrel. 15,
01-MAR-2002 (TrEMBLrel. 20,
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TISSUE=LEAF;
                      SEQUENCE FROM N.A.
                                                              NCBI_TaxID=28982;
                                                                                                                                                       Taxodium distichum
                                                                                                                                                                                                   Probable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam;
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InterPro; IPR002866; MatK_N.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=99811;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PF01348; Intron_maturas2; PF01824; MatK_N; 1.
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                                                                                                                                                                                                 intron maturase
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(TrEMBLrel. 21,
                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
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Pred. No.
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Pred. No.
                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6DAB020074EF2EB4 CRC64;
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RESULT 14
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Best Local
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Q9MTA0; Q9MTA1;
Q1-OCT-2000 (TrE
01-OCT-2000 (TrE
01-JUN-2002 (TrE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN-OBI1, AND SAGA3; TISSUE-LEAF; Kusumi J., Tsumura Y., Yoshimaru H., Tachida H.; Kusumi J., Tsumura Y., Yoshimaru H., Tachida H.; Phylogenetic relationships in Taxodiaceae and Cupressaceae based the matK, chll, trul-ture IGS region and trul intron sequences."; Submitted (JUL-1999) to the EMBL/GenBank/DDBJ databases.
-i- FUNCTION; PROBABLY ASSISTS IN SPLICING CHLOROPLAST GROUP II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MATK.
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"Phylogenetic relationships in Taxodiaceae and Cupressaceae
the matk, chli, trni-trnF IGS region and trni intron sequenc
Submitted (JUL-1999) to the EMBL/GenBank/DDBJ databases.
-I- FUNCTION: PROBABLY ASSISTS IN SPLICING CHLOROPLAST GROUI
                                                                                                                                                                                                                                                                                                                                                               Pfam; PF01348; Intron_maturas2; Pfam; PF01824; MatK_N; 1.
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NCBI_TaxID=3369;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cryptomeria japonica Chloroplast.
                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                  Chloroplast; mRNA processing.
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-I- SIMILARITY: WITH CORRESPONDING ORF IN OTHER AND REGIONS OF SIMILARITY TO MATURASE-LIKE
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InterPro; IPR002866; MatK_N.
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InterPro; IPR002866; MatK_N.
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                                                                                                                                                              Score 41; DB 8; Pred. No. 77;
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RESULT 10,
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ID Q9MSS2
AC Q9MSS2
DT 01-0C7
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RA Adams D., Celliker S. E., Holt R. A., Evans C.A., Gocayne J.D.,
RA Adams M.D., Celniker S. E., Holt R. A.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
RA Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
RA Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Blothakov S.,
RA Berkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P.,
RA Borkova D., Botchen M.R., Bouck J., Brokstein P., Brottier P.,
RA Borkova D., Botchen M.R., Bouck J., Brokstein P., Brottier P.,
RA Borkova D., Botchen M.R., Bouck J., Brokstein P., Davies P.,
RA Glebrios B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M.,
Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Glodek A., Gong P., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Glodek A., Gong P., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Harris N.I., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Harris N.I., Harvey D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Harris N.I., Harvey D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Harris N., Mattei B., McIntosh T.C., McLeod M.P., McPerson D.,
RA Melnet K., Remington K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Melson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Melson D.R., Nelson K.A., Nixon K., Sunders R.D.C., Scheleer F., Shah H.,
RA Shue B.C., Sidel-Kiamos I., Simpson M., Skupski M.P., Smith T.,
RA Shue B.C., Sidel-Kiamos I., Simpson M., Skupski M.P., Smith T.,
RA Shue S.M., Moy M., Murphy B., Murphy L., Muzny D.M., Nelson D.L.,
RA Melson D.R., Nelson K.A., Nixon K., Weissenbach J.,
RA Shue S., Staplecton M., Skupski M.P., Smith T.,
RA Shue S., Staplecton M., Skupski M.P., Smith T.,
RA Shue 
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01-MAY-2000
01-MAY-2000
01-JUN-2001
CG9863 prote:
Q9MSS2;
Q9MSS2;
01-OCT-2000
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Eukaryota, Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pterygota, Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
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InterPro; IPR001525; C5 DNA m
PROSITE; PS00095; C5 WTRSE 2;
SEQUENCE 458 AA; 52193 MW;
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ASE 2; UNKNOWN 1.
93 MW; EB04E2C8(
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OR Pfam; PF01824; Matk N; 1.

TW Chloroplast; mRNA process; NON TER

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01-OCT-2000
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                                                                                                                                                                                                                                                                                      Gadek P.A., Alpers D.L., Heslewood M.M., "Relationships within Cupressaceae sensu morphological and molecular approach."; Am. J. Bot. 87:1044-1057(2000).
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MATK.
Thuja standishii.
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InterPro; IPR000442; Intron_maturse2.
InterPro; IPR002866; MatK_N.
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NCBI_TaxID=13497;
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Eukaryota; Viridiplantae;
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InterPro; IPR000442; Intron_maturse2.
InterPro; IPR002866; MatK_N.
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"Relationships within Cupressaceae
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NCBI_TaxID=89194;
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-i- SIMILARITY: WITH CORRESPONDING AND REGIONS OF SIMILARITY TO MAITOCHONDRIAL INTRONS.
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Am. J. Bot. 87:1044-1057(2000)
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SIMILARITY: WITH CORRESPONDING ORF IN OTHER PLANT CHLOROPLASTS, AND RESIONS OF SIMILARITY TO MATURASE-LIKE POLYPEPTIDES ENCODED MITOCHONDRIAL INTRONS.
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(TrEMBirel. 15, Last sequence update)
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ron maturase (Maturase K) (Fragment).
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MatK_N; 1.
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-!- FUNCTION: PROBABLY ASSISTS IN SPLICING CHIINTRONS (BY SIMILARITY)

-!- SIMILARITY: WITH CORRESPONDING ORF IN OTHE AND REGIONS OF SIMILARITY TO MATURASE-LIKE MITOCHONDRIAL INTRONS.
      Q8T3X8;
01-JUN-2002
01-JUN-2002
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                                                                                                                                                                                                                                                                                                                                                                            Chloroplast;
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InterPro; IPR002866; MatK_N.
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InterPro; IPR000442; Intron maturse2.
InterPro; IPR002866; MatK_N.
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PF01824; MatK_N; 1.
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      (TrEMBLrel. (TrEMBLrel.
                                                                    PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                    60660 MW;
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    Last sequence update)
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                                                                                                                                                                                                                                                                                   Score 42; DB 8;
Pred. No. 57;
                                                                                                                                                                                                                                                                                                                                                    D99F0ECA1874D02F CRC64;
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01-JUN-2002
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Celniker S.;
                                                                                                                                                                                                                                                                              Charlebois R.L., Doolittle W.F., Duguet M., Gaasterland T., Garrett R.A., Ragan M.A., Sensen C.W., Van der Oost J., "The complete genome of the crenarchaeon Sulfolobus solfata Proc. Natl. Acad. Sci. U.S.A. 98:7835-7840(2001).

EMBL; AE006878; AAK42958.1; -.

InterPro; IPR000515; BPD transp.
                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.

STRAINATCC 35092 / DSM 1617 / P2;

MEDLINE=21332295; PubMed=11427726;

She Q., Singh R.K., Confalonieri F., Zivanovic Y., Allard G.,

She Q., Singh R.K., Confalonieri F., Zivanovic Y., Allard G.,

Awayez M.J., Chan-Weiher C.C.-Y., Clausen I.G., Curtis B.A.,

De Moors A., Erauso G., Fletcher C., Gordon P.M.K.,

Heikamp-de Jong I., Jeffries A.C., Kozera C.J., Medina N., Per

Thi-Ngoc H.P., Redder P., Schenk M.S., Theriault C., Tolstrup
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Q97UZ0;
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PROSITE; PS00402; BPD_TRANSP_INN_MEMBR; 1.
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George R., Gonzalez M., Guarin H., Kronmiller B., Li P., Liac
Miranda A., Mungall C.J., Nunoo J., Pacleb J., Paragas V., Pa
Patel S., P., Devis S.E., Rubin
Calaiber C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sulfolobus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Stapleton M., Brokstein P., Hong L., Agbayani A., Champe M., Chavez C., Dorsett V., Dresnek D., Far
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Arthropoda; Tracheata; He
Pterygota; Neoptera; Endopterygota; Diptera;
Ephydroidea; Drosophilidae; Drosophila.
NCBI_TaxID=7227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Archaea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (MAR-2002) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-JUN-2002 (TrEMBLrel.
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NCE 271 AA;
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VIRRWIRR
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(TrEMBLrel. 21, Last annotation update)
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                                                                                                                                            Length 286;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR001503; GT 10.
Pfam; PF00852; Glyco_transf_10; 2.
Glycosyltransferase; Transferase.
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J. Biol. Chem. 272:21349-21356(1997).
EMBL; AP006039; AAB93985.1; -.
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                                                                                ATP-binding; Hypothetical SEQUENCE 391 AA; 44473
                                                                                                                                                                                  EMBL; AP000062; BAA80602.1; -. Interpro; IPR000719; Buk pkinase. Interpro; IPR000687; RIOT_UNK. Pfam; PF01163; RIOT; 1.
                                                                                                                                                                                                                                                                                                                                  Hosoyama A., Fukui S., Nagai Y., Nishijima K., Nakazawa H. Takamiya M., Masuda S., Funahashi T., Tanaka T., Kudoh Y., Yamazaki J., Kushida N., Oguchi A., Aoki K.-I., Kubota K., Nakamura Y., Nomura N., Sako Y., Kikuchi H.;
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01-MAR-2002
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STRAIN=NCTC 11637;
MEDLINE=97407924; PubMed=9261148;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=210;
                                                                                                                       PROSITE; PS50011; PROTEIN KINASE DOM; PROSITE; PS01245; RIO1; 1
                                                                                                                                                                                                                                                                  crenarchaeon, Aeropyrum pernix K1.
DNA Res. 6:83-101(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Archaea; Crenarchaeota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-NOV-1999
                                                                                                                                                                                                                                                                                                          Yamazaki J., Kushida N., Oguchi A., Aoki K.-I., Kubota K.,
Nakamura Y., Nomura N., Sako Y., Kikuchi H.;
"Complete genome sequence of an aerobic hyper-thermophilic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=56636;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Desulfurococcaceae;
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      PubMed=10898782;
Gadek P.A., Alpers D.L., Heslewood M.M.
"Relationships within Cupressaceae sens
morphological and molecular approach.";
Am. J. Bot. 87:1044-1057(2000).
                                                                              Spermatophyta; Coniferopsida; Coniferales; Actinostrobus.
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AND REGIONS OF SIMILARITY TO MATURASE-LIKE POLYPEPTIDES ENCODER
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                                                                                                                                                                        M55524; AAA25957.1; -.
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                                                                                   1 RVVRVVRRWVR 11
                                                                                                                                                   113 AA; 12687 MW;
            PRELIMINARY;
                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                    73.8%;
81.8%;
                                                                78
                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                              Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                   Created)
                                                                                                                    Score 45; DB 2; Pred. No. 4.6;
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                                                                                                                                                   06145F871F17F723 CRC64;
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                                                                                                                              Length 113;
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                                                                                                                                  Query Match 59.0%;
Best Local Similarity 75.0%;
Matches 6; Conservative
                                                                                                                                                                                                   EMBL; U13194; AAA68465.1; -.
EMBL; X83413; CAA58366.1; -.
DNA replication.
SEQUENCE 662 AA; 76316 MW
                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation—the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gompels U.A., Nicholas J., Lawrence G., Jones M., Thomson B.J., Martin M.E., Efstathiou S., Craxton M., Macaulay H.A.; "The DNA sequence of human herpesvirus-6: structure, coding content, and genome evolution.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human herpesvirus-6 containing homologues of human cytomegalovirus major immediate-early and replication genes."; Virology 204:738-750(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A. MEDLINE=95266321; PubMed=7747482;
                                                                  625 LRVLRRWV 632
                                                                                                3 VRVVRRWV 10
                                                                                                                                                                                                        76316 MW;
                                                                                                                                  Score 36; DB 1; Length 662;
Pred. No. 59;
2; Mismatches 0; Indels
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                                                                                                                                     0;
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Query Match
Best Local S
Matches 7
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EMBL; X00469; CAA25153.1; -.
EMBL; M26129; AAA41025.1; -.
PIR; A00185; O4RTMC.
PIR; S45716; S45716.
HSSP; P00179; 1DT6.
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CONFLICT
CONFLICT
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or send a
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CHAIN
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J. Cell Biol. 139:589-599(1997).

-I- FUNCTION: CYTOCHROMES P450 ARE A GROUP OF HEME-THIOLATE

MONOOXYGENASES. IN LIVER MICROSOMES, THIS ENZYME IS INVOLVED IN AN NADPH-DEPENDENT ELECTRON TRANSPORT PATHWAY. IT OXIDIZES A VARIETY OF STRUCTURALLY UNRELATED COMPOUNDS, INCLUDING STEROIDS, PATTY
                                                                                                                                                                                     PROPEP
CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                            the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                   CHAIN
                                                               SEQUENCE
                                                                                                                                                                                                                                  Microsome;
                                                                                                                                                                                                                                                  Oxidoreductase;
                                                                                                                                                                                                                                                             PROSITE; PS00086; CYTOCHROME_P450; 1.
                                                                                                                                                                                                                                                                                        InterPro; IPR001128; Pfam; PF00067; p450;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Addya S., Anandatheerthavarada H.K., Mullick J., Avadhani N.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN=Sprague-Dawley; TISSUE=Liv
MEDLINE=98012193; PubMed=9348277;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUBCELLULAR LOCATION.
                                                                                                                                                                                                                                                                             PRINTS; PR00385; P450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Targeting of NH2-terminal-processed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Remli A.M., Bresnick E.; "Gene structure and nucl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BE MORE SENSIBLE TO PROTEOLYSIS.

PTM: TWO FORMS; MT2A (LONG FORM) AND MT2B (SHORT FORM); ARE PRODUCED BY NH2-TERMINAL PROTEOLYTIC CLEAVAGE. THIS CLEAVAGI ACTIVATES A CRYPTIC MITOCHONDRIAL TARGETING SIGNAL. SIMILARITY: BELONGS TO THE CYTOCHROME P450 FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MITOCHONDRIAL.
TISSUE SPECIFICITY: LIVER.
INDUCTION: BY 3-METHYLCHOLANTHRENE (3MC) AND BETA-NAPHTOFLAVONE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACIDS, AND XENOBIOTICS.

CATALYTIC ACTIVITY: RH + reduced flavoprotein + O(2) = ROH + oxidized flavoprotein + H(2)O.

SUBCELLULAR LOCATION: MEMBRANE-BOUND; ENDOPLASMIC RETICULUM AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12 AMINO ACID SEQUENCE BETWEEN 33 AND 44 FUNCTIONS AS A PUTATIVE MITOCHONDRIAL-TARGETING SIGNAL. THE REMOVAL OF THE FIRST 4-OR 32-AMINO ACID RESIDUES FROM THE INTACT PROTEIN POSITIONS THE MITOCHONDRIAL TARGETING SIGNAL FOR EFFICIENT BINDING TO THE MITOCHONDRIAL IMPORT RECEPTORS. THE MEMBRANE-FREE P4501A1 SEEMS 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN: CONTAINS A CHIMERIC SIGNAL THAT FACILITATES TARGETING OF THE PROTEIN TO BOTH THE ENDOPLASMIC RETICULUM AND MITOCHONDRIA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             structure and nucleotide sequence for rat cytochrome P-450c."; Biochem. Biophys. 237:465-476(1985).
 Similarity 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                s requires a license agreement (S an email to license@isb-sib.ch).
                                                                                                                                                                                                                Lase; Monooxygenase; Electron transport; Endoplasmic reticulum; Mitochondrion.

1 524 CYTOCHROME P450 lA1.
                                                               524 AA;
   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Avadhani N.
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524
461
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                                                                           HEME.

MITOCHONDRIAL-TARGETING S

VT->AI: NO PROTEOLYTIC CI

I -> M (IN REF. 2).

M -> S (IN REF. 3).
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                 Score 36; DB
Pred. No. 46;
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                                                             C766DF8044D598C5 CRC64;
Mismatches
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RESULT 14
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                                                                                                 DNA helicase/primase complex associated protein U74 OR HDRF1.
                                                                                                                       01-OCT-1996
16-OCT-2001
                                                                                                                                                                  HSV6U
HEPA_HSV6U
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Q51761;
            MEDLINE=95027704;
Nicholas J.;
                                 SEQUENCE FROM N.A
                                                                                                                                            P52375;
01-OCT-1996
                                                                                                                                                                                                                                                                                                               SEQUENCE
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01-NOV-1997
                                                                 Betaherpesvirinae;
                                                                           Viruses; dsDNA viruses,
                                                                                    Human herpesvirus (type 6 / strain Uganda-1102)
                                                                                                                                                                                                                                                                                                                       Transposable element; Transposition; DNA-binding; DNA recombination.
DNA_BIND 25 44 H-T-H MOTIF (POTENTIAL).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gene 155:77-82(1995)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
Putative transposase for insertion sequence IS1162.
"Nucleotide sequence analysis of a 21-kbp region of the genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     from Pseudomonas fluorescens.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Solinas F., Marconi A.M., Ruzzi M., "Characterization and sequence of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=95212933; PubMed=7698671;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=294;
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                                                                                                                                                                                                                                                                                                                                                                                        an email to license@isb-sib.ch).
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novel insertion
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RESULT 12
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Best Local S
Matches 6
                                                                  SEQUENCE FROM N.A.

STRAIN=Suakoko; TISSUE=Midgut;
MEDLINE=9337779; PubMed=8335004;
Mueller H.M., Crampton J.M., della;
"Members of a trypsin gene family in the gut by blood meal.";
EMBO J. 12:2891-2900(1993).
                                                                                                                                                                                                                                                                                                                                                                       DOMAIN
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01-FEB-1996
15-JUN-2002
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SEQUENCE
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TRANSMEM
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P35037;
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Pfam; PF00520; ion trans; 1.
SMART; SM00100; cNMP; 1.
PROSITE; PS00888; CNMP_BINDING_1; 1.
PROSITE; PS00889; CNMP_BINDING_2; 1.
PROSITE; PS00889; CNMP_BINDING_3; 1.
                                                                                                                                            Alupheres gambiae (African malaria mosquito).
Eukaryota; Metazoa; Archropoda; Mandibulata; Pancrustacea; Hexapoda;
Insecta; Pterygota; Neoptera; Endopterygota; Diptera; Nematocera;
Culicoidea; Anopheles.
              TRANSMEM
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                                                            FUNCTION: MAJOR FUNCTION
SWISS-PROT
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10r (EC 3.4.21.4).
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Pred. No.
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CAMP (BY SIMILARITY).
CAMP (POTENTIAL).
CAMP (POTENTIAL).
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CYTOPLASMIC (POTENTIAL).
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PRINTS; PR00722; CHYMOTRYPSIN.
SMART; SM00020; Tryp_SPc; 1.

PROSITE; PS50240; TRYPSIN_DOM; 1
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SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
MEDLINE=84298082; PubMed=6089174;
Sogawa K., Gotch O., Kawajiri K., Fujii-Kuriyama Y
Sogawa K., Gotch O., Kawajiri K., Fujii-Kuriyama Y
"Distinct organization of methylcholanthrene- and
"Distinct organization of methylcholanthrene- and
inducible cytochrome P-450 genes in the rat.";
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MEDLINE=8419583; PubMed=6324135;
MEDLINE=8419583; PubMed=6324135;
Yabusaki Y., Shimizu M., Murakami H., I
"Nucleotide sequence of a full-length of the compact of the c
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Eukaryota; Metazoa; Chor
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30-MAY-2000 (Rel. 39, Last annotation update)
Cytochrome P450 1A1 (EC 1.14.14.1) (CYP1A1) (
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MEDLINE=85147736; PubMed=3838427;
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                                                                                                                                  , Nakamura K., Oeda K., h cDNA coding for 3- cytochrome P-450MC.";
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Nucleic Acids Res. 19:2881-2887(1991).
-I- FUNCTION: PROBABLY ASSISTS IN SPLICING CHLOROPLAST
                                                                                                                                                                                      Tsudzuki J., Nakashima K., Tsudzuki T., Wakasugi T., Sugiura M.; "Chloroplast DNA of black pine retains
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                          Wakasugi T.,
                                                MEDLINE=95024047; PubMed=7937893;
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                                                                                                                  rRNA genes: nucleotide sequences and the absence of rps16.";
1. Genet. 232:206-214(1992).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (Rel. 25, Created)
(Rel. 25, Last sequence update)
(Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                             Tsudzuki
                                                                                                                                                                                                                                                                                                                                                         idiplantae; Streptophyta; Embryophyta;
Coniferopsida; Coniferales; Pinaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
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                          J.
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ida; Coniferales; Pinaceae; Pinus.
                          Ito S.,
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Pred. No. 20;
                                                                                                                                                                                                                                                                                                                                                                                                                           (Japanese black pine)
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                             Tsudzuki
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RESULT 11
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Best Local
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                                                                                                                    CNG2_RABIT
Q28718;
          This SWISS-PROT entry is copyright. It is produced through a collaboratic between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on it
                                                                                                                                                                                                                                                                                                                          Oryctolagus cuniculus (Rabbit).
Eukaryota; Metazoa; Chordata; Craniata; Ve:
Mammalia; Eutheria; Lagomorpha; Leporidae;
                                                                                                                                                                                                                                                                                                                                                                                                 01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Cyclic-nucleotide-gated olfactory channel (Cycation channel 2) (CNG channel 2) (CNG-2) (CNG-2)
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Pfam; PF01824; Matk N; 1. 
Chloroplast; mRNA processing. 
SEQUENCE: 515 AA; 60794 MW; 1
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EMBL; D17510; BAA04308.1; -.
PIR; S20449; S20449.
InterPro; IPR000442; Intron maturse2.
InterPro; IPR002866; MatK_N.
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-!- FUNCTION: PROBABLY ASSISTS IN SPLICING CHLOROPLAST
                                                                                 -!- SUBCELLULAR LOCATION:
-!- SIMILARITY: BELONGS TO
                                                                                                                                                                                                                                                                                                                                                                        CNGA2 OR CNCG2.
                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
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- SIMILARITY:
AND REGIONS
                                                                                                              SENSORY NEURONS
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                                                                                  Integral membrane protein.

THE CYCLIC NUCLEOTIDE-GATED CATION CHANNEL
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Pred. No.
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P95176;
30-MAY-2000 (Rel. 39, Created)
30-MAY-2000 (Rel. 39, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
NADH dehydrogenase I chain F (EC 1.6.5.3) (NA
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Cole S.T., Brosch R., Parkhill J., Garnier T., Churcher C., Harris Gordon S.V., Eiglaneier K., Gas S., Barry C.B. III, Tekaia F., Gordon S.V., Eiglaneier K., Gas S., Barry C.B. III, Tekaia F., Badcock K., Basham D., Brown D., Chillingworth T., Connor R., Bavies R., Devlin K., Feltwell T., Gentles S., Hamlin N., Holroyd Hornsby T., Jagels K., Krogh A., McLean J., Moule S., Murphy L., Oliver S., Osborne J., Quail M.A., Rajandream M.A., Rogers J., Rutter S., Seeger K., Skelton S., Squares S., Squares R., Sulston J.E., Taylor K., Whitehead S., Barrell B.G., "Deciphering the biology of Mycobacterium tuberculosis from the complete genome sequence.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              between the Swiss Institute ... There are ... the European Bioinformatics Institute. There are ... the European Bioinformatics Institutions as long as its content is use by non-profit institutions as long as its content is use by non-profit institutions as long as its content is use by non-profit institutions as long as its content is use by non-profit institutions as long as its content is used to be not profit in the subject of the subject in the subject of the subject in the subject of the subject in the sub
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Peterson J., DeBoy R., Dodson R., Gwinn M.L., Haft D
Kolonay J.F., Nelson W.C., Umayam L.A., Ermolaeva M.
Delcher A., Utterback T., Weidman J., Khouri H., Gil
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STRAIN=CDC 1551 / Oshkosh;
Fleischmann R.D., Alland D.,
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                                                                                                                                                                                                                                                 Oxidoreductase; NAD; Ubiquinone; Flavoprotein;
                                                                                                                                                                                                                                                                                   InterPro; IPR001949; Complex1 51K. Pfam; PF01.512; Complex1 51K; 1. PROSITE; PS00644; COMPLEX1 51K 1; 1. PROSITE; PS00645; COMPLEX1 51K 2; 1.
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EMBL; AE007118; AAK47577.1; -.
TIGR; MT3238; -.
TubercuList; Rv3150; -.
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Bacteria; Actinobacteria; Actinobacteria (class); Actinobacteridae;
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aft D., Hickey E.,
va M.D., Salzberg {
, Gill J., Mikula /
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Spermatophyta; Con
NCBI_TaxID=89482;
                        01-MAR-1992
01-MAR-1992
15-JUN-2002
Probable int
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Q9MVV7;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cheng Y., Nicolson R.G., Tripp K., Chaw S., "Phylogeny of taxaceae and Cephalotaxaceae chloroplast matK gene and nuclear rDNA ITS Mol. Phylogenet. Evol. 14:353-365(2000). -1- FUNCTION: PROBABLY ASSISTS IN SPLICING
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                                                                                                         MATK_PINCO
P24685;
                                                                                                                                                                                                                                                                                                                                                                                                                Chloroplast;
SEQUENCE 4:
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InterPro; IPR002866; MatK N.
Pfam; PF01348; Intron_maturas2; 1.
Pfam; PF01824; MatK_N; 1.
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cron maturase (Maturase K).
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
MEDLING-83189071; PubMed-6221115;
Sanger F., Coulson A.R., Hong G.F., Hi
"Nucleotide sequence of bacteriophage
J. Mol. Biol. 162:729-773(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Eventhe Eventhe Eventh                                                                                                                                                                                                                                                                                                                                             "DNA sequence of the int-xis-Pi region overlap of the int and xis genes."; Nucleic Acids Res. 8:1765-1782(1980).
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DNA recombination;
72 AA;
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MEDLINE=81053845; PubMed=6253947;
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"Site-specific recombination functions
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MEDLINE=80234646; PubMed=6446713;
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Lambda-like viruses.
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.ons of bacteriophage lambda:
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FEMS Microbiol. Lett.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nomura K., Yoshida T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Serratia marcescens
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15-DEC-1998
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                                                                                                                                                                                                                                                                        MEROPS; S12,UNW; -
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A48176; A48176.
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ase precursor (EC 3.5.2.6) (Ceph
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BELONGS TO THE CLASS-C BETA-LACTAMASE FAMILY
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GEORS MW; OE6A4843502200AA
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                                                                         BETA-LACTAMASE.
BY SIMILARITY.
SUBSTRATE (BY SIMIL)
W; 890CEE7C27925150 (
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                 Score 38;
Pred. No.
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Best Local
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30-MAY-2000 (Rel. 39, I
15-JUN-2002 (Rel. 41, I
50S ribosomal protein I
RPL31E OR APE1087.
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Q9MSV2; Q9MT93;
15-JUN-2002 (Re
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InterPro; IPR000442; Intron matu
InterPro; IPR002866; Matk N.
Pfam; PF01348; Intron maturas2;
Pfam; PF01824; Matk N; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                       between the Swiss Institute of Bioinformatic the European Bioinformatics Institute. Ther the European Bioinformatics Institutions as long a modified and this statement is not removed: entitles requires a license agreement (See hor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kusumi J., Tsumura Y., Yoshimaru H., Tachida H.; Phylogenetic relationships in Taxodiaceae and Cupressaceae bas the matK. chlL, trnL-trnF IGS region and trnL intron sequences. Submitted (JUL-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gadek P.A., Alpers D.L., Heslewood M.M., "Relationships within Cupressaceae sensu morphological and molecular approach.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its
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SEQUENCE OF 1-477 FROM N.A.
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        Desulfurococcaceae; Aeropyrum NCBI_TaxID=56636;
                                     Archaea; Crenarchaeota;
                                                   Aeçopyrum pernix.
                                                                                                                                 Q9ΥD2̄5;
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                                                                                                                                                                                                                                                                                                                      SEQUENCE
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                                                                                                                                                                                                                                                                                                                                   Chloroplast;
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SIMILARITY: WITH CORRESPONDING ORF IN OTHER PLANT AND REGIONS OF SIMILARITY TO MATURASE-LIKE POLYPER
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intron maturase (Maturase K).
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508 AA; 60732 MW;
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P11683; P16408;
01-OCT-1989 (Rel
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Pfam; PF01198; Ribosomal_L31e; 1.
PROSITE; PS01144; RIBOSOMAL_L1E; PALSE_NEG
Ribosomal protein; Complete proteome.
SEQUENCE 105 AA; 12527 MW; 7E5DF7999E74;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         crenarchaeon, Aeropyrum pernix Kl.";
DNA Res. 6:83-101(1999).
-!- SIMILARITY: BELONGS TO THE L31E FAMILY OF RIBOSOMAL PROTEINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kawarabayasi Y., Hino Y., Horikawa H., Yamazaki S., Haikaw. Jin-no K., Takahashi M., Sekine M., Baba S.-I., Ankai A., I Hosoyama A., Fukui S., Nagai Y., Nishijima K., Nakazawa H., Takamiya M., Masuda S., Funahashi T., Tanaka T., Kudoh Y., Yamazaki J., Kushida N., Oguchi A., Aoki K.-I., Kubota K., Nakamura Y., Nomura N., Sako Y., Kikuchi H.; Nomura Y., Nomura N., Sako Y., Kikuchi H.;
SEQUENCE FROM N.A.
SPECIES=Phage HK022;
MEDLINE=89342457; PubMed=2547971;
Yagil E., Dolev S., Oberto J., Ki
                                                                                                                                                                                              SPECIES=Phage 434;
MEDLINE=88167849; PubMed=2965063;
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                                                                                                                                                                                                                                                                                                                                             SPECIES=Phage 434;
MEDLINE=91346141; PubMed=1715186;
Baker J., Limberger R., Schneider S.
"Recombination and modular exchange
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; AP000060; BAA80072.1; -
                                                                                                             "Functional elements of DNA upstream from the integrase are conserved in bacteriophages 434 and lambda."; Gene 61:135-144(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
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ai A., Kosugi H.,
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0 mycobacteri
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Total number of hits satisfying chosen parameters:
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205.199 Million cell updates/sec
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ANPC SERMA
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MATK FINCO
MATK PINCO
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TRY3 ANOGA
CP11 RAT
TRA2 PSEFI
HEPA HSV6U
RDMP RAT
GNRP RAT
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POLM RUBYT
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MATK CHALA

Q9MSV6;

15-JUN-2002

15-JUN-2002

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                                                                                                                                                                                                                             EMBL; AF152181; AAF25734.2; -.
InterPro; IPR000442; Intron_maturse2.
InterPro; IPR002866; MatK_N.
                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EM the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content modified and this statement is not removed. Usage by and entities requires a license agreement (See http://www.isb-sorsend an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                            Gadek P.A., Alpers D.L., Heslewood M.M., Quinn C.J.; "Relationships within Cupressaceae sensu lato: a combined morphological and molecular approach."; Am. J. Bot. 87:1044-1057(2000).

-I- FUNCTION: PROBABLY ASSISTS IN SPLICING CHLOROPLAST GROUP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MATK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Probable intron maturase (Maturase K) (Fragment).
                                                                                                                                                                                                    Pfam; PF01348; Intron maturas2; 1. Pfam; PF01824; MatK_N; 1.
                                                                                                                                                                                                                                                                                                                                                                                                     INTRONS.

-!- SIMILARITY: WITH CORRESPONDING ORF IN OTHER PLANT CHLOROPLASTS, AND REGIONS OF SIMILARITY TO MATURASE-LIKE POLYPEPTIDES ENCODED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Spermatophyta; Coniferopsida; Coniferales; Cupressaceae; Chamaecyparis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chloroplast.

Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. PubMed=10898782;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=58030;
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                                                      159 LVŘIFŘŘWIŘ 168
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RPOS_PSEAE
HCAD_ECOLI
CCA_ARCFU
PPOX_MYCTU
POX_MYCTU
CAT1_CUCPE
CAT1_SUYBN
CAT3_SOYBN
LYXK_ECOLI
MATK_CEDAT
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                                                                                                                     Score 41;
Pred. No.
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Q8wwz3
P35035
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P48350
P29756
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EMBL outstation a collaboration

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l y genome po l y genome po l escherichia

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RESULT 2
MATK_CUNLA

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Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 s

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Title: Perfect score:

US-10-079-075-9 61 1 RVVRVVRRWVRR 12

Scoring table: Sequence:

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RESULT 14
G70647
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QKSE
                                                                                        NADH2 dehydrogenase (ubiquinone) (EC 1.6.5.3) I chain F - Mycobacterium tuberculosis C; Species: Mycobacterium tuberculosis
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C;Superfamily: histidine permease
                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: EMBL:X52964; NID:g47223; PIDN:CAA37137.1; PID:g47224
A;Note: submitted to the EMBL Data Library, May 1990
A;Note: the authors translated the codon GTA for residue 258 as Asp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Experimental source: strain PAO1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Reference number: A82950; A; Accession: H83001
           Rajandream,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Title: Complete genome
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A; Residues: 1-376 < NOM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Reference number: A48176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R; Nomura, K.; Yoshida, T. FEMS Microbiol. Lett. 70, 295-300,
                                               ;Species: Mycobacterium tuberculosis
;Date: 14-May-1999 #sequence_revision 14-May-1999 #text_change 03-Jun-2002
;Accession: G70647
                                                                                                                                                                                                                                                                                                                    ;Superfamily: Escherichia coli beta-lactamase;Reywords: antibiotic resistance; hydrolase;l-21/Domain: signal sequence #status predicted <SIG>;22-376/Product: beta-lactamase #status predicted <MA;79/Active site: Ser #status predicted
        ;Cole, S.T.; Brosch, R.;
Connor, R.; Davies, R.;
ajandream, M.A.; Rogers,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Accession: A48176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Species: Serratia marcescens
Date: 30-Jun-1992 #sequence_revision
Accession: A48176; S11710
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                                                                                                                                                                                                                                                                                                                                                                                                        ;Gene: ampC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Title: Nucleotide sequence
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50; MUID:20437337; PMID:10984043
        Parkhill, J.; Garnier, T. Devlin, K.; Feltwell, T.; J.; Rutter, S.; Seeger, K
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Coulter, S.N.; Fo
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          Gentles, S
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A;Description: catalyzes the reduction of ubiquinone to ubiquinol by NADH A;Pathway: oxidative phosphorylation (;Superfamily: NADH dehydrogenase (ubiquinone) chain F; NADH dehydrogenase (C;Keywords: 4Fe-4S; flavoprotein; FMN; iron-sulfur protein; metalloprotein; F;43-421/Domain: NADH dehydrogenase (ubiquinone) I chain F homology <NUOF> F;61-70/Region: NADH binding motif F;177-192/Region: FMN binding motif F;177-192/Region: FMN binding motif
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          probable maturase, intron encoded - Japanese black pine chloroplast N;Alternate names: hypothetical protein 515, trnK 3'-region C;Species: chloroplast Pinus thunbergiana (Japanese black pine) C;Pate: 17-Apr-1993 #sequence revision 17-Apr-1993 #text_change 18-C;Accession: S20449; T07428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Authors: Sqares, R.; Sulston, J.E.; Taylor, K.; Whitehead, S.; A; Title: Deciphering the biology of Mycobacterium tuberculosis fr A; Reference number: A70500; MUID:98295987; PMID:9634230 A; Accession: G70647
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A;Title: Chloroplast DNA of black pine retains a residual inverted repeat lacking, A;Reference number: S20449; MUID:92212283; PMID:1557027
                                                                                                                                                                                                                                                                                                                                     A;Cross-references: EMBL:D11467; NID:g344007; PIDN:BAA02022.1; R;Wakasugi, T.; Tsudzuki, J.; Ito, S.; Makashima, K.; Tsudzuki, Proc. Natl. Acad. Sci. U.S.A. 91, 9794-9798, 1994. A;Title: Loss of all ndh genes as determined by sequencing the
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A; Residues: 1-445 < C
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A;Residues: 1-515 <TSU>
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ce: strain H37Rv
                     62.3%;
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C;Superfamily: phage lambda
C;Keywords: DNA binding
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A;Title: Site-specific recombination functions of bacteriophage lambda: DNA sequence of A;Reference number: A93844; MUID:80234646; PMID:6446713
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A: Residues: 1-72 < HOE>
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A; Residues: 1-72 < DAV >
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A; Title: DNA sequence of the int-xis P--I region of the A; Reference number: A93699; MUID:81053845; PMID:6253947
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A;Residues: 1-72 <SAN>
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A; Residues: 1-72 < DAN>
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;Residues: 1-72 <YA
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;Date: 31-Oct-1980 #sequence revision 23-Oct-1981 #text_change
;Accession: C94164; C43012; A93699; A93844; A04321
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A;Gene: ECs0801
C;Superfamily: p
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C;Superfamily: phage lambda excisionase
C:Kerwords: DNA binding
                                                                                                                                                                           A; Reference number: A; Accession: T31302
                                                                                                                                                                                                         R;Romine, M.F.; Stillwell, L.C.; Wong, K.K.; Thurston, submitted to the EMBL Data Library, July 1998 A;Description: Complete sequence of a 184 kb catabolic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R;Hayashi, T.; Makino, K.; Ohnishi, M.; gasawara, N.; Yasunaga, T.; Kuhara, S.; DNA Res. 8, 11-22, 2001
                                                                              A;Genome:
                                                                                                                           A; Molecule type: DNA
A; Residues: 1-201 < ROM>
                                                                                                                                                                                                                                                       C; Accession:
                                                                                                                                                                                                                                                                                          hypothetical C;Species: Sp
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A;Experimental source: strain
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A; Residues: 1-72 <HAY>
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C;Date: 18
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                                                                                                              A;Cross-references:
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/Species: Sphingomonas aromaticivorans
/pate: 11-Jan-2000 #sequence_revision 11-Jan-2000 #text_change 11-Jan-2000
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Best Local
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Local Similarity
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orf1313
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                                                                                                            EMBL:AF079317; NID:g3378261; PID:g3378443; PIDN:AAD04026.1
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             60.0%;
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Pred. No.
               Score 38;
Pred. No.
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Shiba, T.; Hattori, I
           DB
41;
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                                                                                                                                                                                                         catabolic plasmid
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                               Length 201;
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Shinagawa,
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probable ribosomal protein L31 APE1087 - Aeropyrum pernix (strain C;Species: Aeropyrum pernix C;Date: 20-Aug-1999 #sequence revision C;Accession Profes
 RESULT 5
(771862 %)
alpha-(1,3)-fucosyltransferase -
C;Species: Helicobacter pylori
A;Variety: strain J99
C;Date: 12-Feb-1999 #sequence_rev
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A;Title: Complete genome sequence of an aerobic hyper-thermophilic Crenarchaeon, Ae A;Reference number: A72450; MUID:99310339; PMID:10382966
A;Accession: H72708
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A; Note: T10K17.40
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A;Molecule type: DNA
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A; Accession: T46005
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A;Experimental source: strain K1
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A; Residues: 1-105 < KAW>
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                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Status: preliminary
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Species: Aeropyrum pernix
Date: 20-Aug-1999 #sequence_revision 20-Aug-1999 #text_change 02-Aug-2002
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 #sequence_revision 12-Feb-1999
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                                                          Helicobacter
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#text_change 08-Oct-1999
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RESULT 7
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R;Alm, R.A.; Ling, L.S.L.; Moir, D.T.; King, B.L.; Brown, E.D.; Doig, P.C.; Smith, I Ives, C.; Gibson, R.; Merberg, D.; Mills, S.D.; Jiang, Q.; Taylor, D.E.; Vovis, Nature 397, 176-180, 1999

A;Title: Genomic sequence comparison of two unrelated isolates of the human gastri A;Reference number: A71800; MUID:99120557; PMID:9923682
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C;Species: Helicobacter pylori

A;Variety: strain J99

C;Date: 12-Feb-1999 #sequence_revision 12-Feb-1999 #text_change 08-Oct-1999
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A;Title: Genomic sequence comparison of two unrelated isolates of the human gastric patalognees and p
                                                                                                                                                                                                                                                                              R;Tomb, J.F.; White, O.; Kerlavage, A.R.; Clayton, R.A.; Sutton, G.G.; Fleischmann, R. Peterson, S.; Loftus, B.; Richardson, D.; Dodson, R.; Khalak, H.G.; Glodek, A.; McKen son, J.D.; Kelley, J.M.; Cotton, M.D.; Weidman, J.M.; Fujii, C.; Bowman, C.; Watthey, Nature 388, 539-547, 1997

A;Authors: Wallin, E.; Hayes, W.S.; Borodovsky, M.; Karpk, P.D.; Smith, H.O.; Fraser, A;Title: The complete genome sequence of the gastric pathogen Helicobacter pylori. A;Reference number: A64520, MUID:97394467; PMID:9252185

A;Accession: C64601
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A;Experimental source: strain J99
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A; Residues: 1-436 < ARN>
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A;Accession: G71862
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C;Species: Helicobacter pylori
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A;Experimental source: strain J99
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                                                                                                                                                                                                                                                 A;Status: preliminary; nucleic acid sequence not shown; translation
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Date: 09-Aug-1997 #sequence_revision 09-Aug-1997 #text_change 08-Oct-1999;Accession: C64601
                                                                                                                                                                                                       Molecule type: DNA
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nes 5; Conserv
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Result
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Maximum Match 100%
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score
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ALIGNMENTS

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C;Accession: G90462
R;She, Q.; Singh, R.K.; Confalonieri, F.; Zivanovic, Y.; Allard, G.; Awayez, M.J.; Chan Jong, I.; Jeffries, A.C.; Kozera, C.J.; Medina, N.; Peng, X.; Thi-Ngoc, H.P.; Redder, arrett, R.A.; Ragan, M.A.; Sensen, C.W.; Van der Oost, J. submitted to GenBank, April 2001
A;Description: Sulfolobus solfataricus complete genome.
                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 2
G90462
G90462
ABC transporter, permease (glucose) SSO2848 [imported] - Sulfolobus solfataricus
C;Species: Sulfolobus solfataricus
C;Species: Sulfolobus solfataricus
                                                                                                                                                                   A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-286 <KUR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                awa, H.; Takamiya, M.; Masuda, S.; Funahashi, T.; Tanaka, T.; Kudoh, Y.; Yamazaki, J.; DNA Res. 6, 83-101, 1999
A;Title: Complete genome sequence of an aerobic hyper-thermophilic Crenarchaeon, Aeropy A;Reference number: A72450; MUID:99310339; PMID:10382986
A;Accession: E72539
                                                                                                   A; Gene: SSO2848
                                                                                                                                             A;Cross-references: GB:AE006641; NID:g13816206; PIDN:AAK42958.1; GSPDB:GN00155
                                                                                                                                                                                                                                                                 A; Reference number: A99139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Gene: APE1602
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A;Experimental source: strain K1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-391 <KAW>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R;Kawarabayasi, Y.; Hino, Y.; Horikawa, H.; Yamazaki, S.; Haikawa, Y.; Jin-no, K.; awa, H.; Takamiya, M.; Masuda, S.; Funahashi, T.; Tanaka, T.; Kudoh, Y.; Yamazaki,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             hypothetical protein APE1602 - Aeropyrum pernix (strain K1)
C;Species: Aeropyrum pernix
C;Date: 20-Aug-1999 #sequence_revision 20-Aug-1999 #text_change 20-Aug-1999
C;Accession: E72539
                                                                                                                                                                                                                                             A; Accession: G90462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Experimental source: strain
       Matches
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  Similarity 6; Conserv
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Score 41; DB Pred. No. 18; 2; Mismatches
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Query Match
Best Local Similarity
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                                                                                                                                                                                                                                   COMPUTER 2.703

COMPUTER READABLE FORM:

MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.4

COMPUTER: APPLE MACINTOSH
OPERATING SYSTEM: MACINTOSH
SOFTWARE: M.S. WORD 5.0

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/801,028

FILING DATE: 19-FEB-1997

PRIOR APPLICATION NUMBER: 08/279,472

FILING DATE: JULY 22, 1994
APPLICATION NUMBER: 08/225,476

FILING DATE: 04-20-94

APPLICATION NUMBER: 08/225,476

FILING DATE: 04-094

APPLICATION NUMBER: 08/225,476

FILING DATE: 04-094

APPLICATION NUMBER: 08/225,476
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APPLICANT: JOAN GARBARINO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: 202-783-6031
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tent No.
FILING DATE: 11-08-93
ATTORNEY/AGENT INFORMATION:
NAME: WASSERMAN, FRAN S.
REGISTRATION NUMBER: 34,273
REFERENCE/DOCKET NUMBER: 4013-104
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE: PO
HYPOTHETICAL: NO
FRAGMENT TYPE: 1:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-783-6040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
ADDRESSEE: STEVEN J. HULTQUIST
ADDRESSEE: INTELLECTUAL PROPERTY/TECHNOLOGY LAW
STREET: 200 PARK DRIVE, SUITE 210
STREET: P.O. BOX 14329
CITY: RESEARCH TRIANGLE PARK
STATE: NORTH CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 37 amino acids
                                                                                                                    FILING DATE: 04-08-94
APPLICATION NUMBER: 08/039,620
FILING DATE: 06-04-93
APPLICATION NUMBER: 08/148,491
FILING DATE: 11-08-93
APPLICATION NUMBER: 08/148,889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: JESSE M. JAYNES
APPLICANT: WILLIAM BEKKNAP
TITLE OF INVENTION: UBIQUITIN-LYTIC PEPTIDE FUSION GENE CONSTRUCTS, PROTEIN PRODUC
NUMBER OF SEQUENCES: 98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: No. 6001805ember, 8, 1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY: U. ZIP: 27709
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1018102
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26.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; Score 60; DB 3; Pred. No. 0.08; 15; Mismatches
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                                                               Matches
                                                                                                Query Match
                                                                                  Best
                                                                                                                                             DESCRIPTION: PEPTIDE
HYPOTHETICAL: NO
FRAGMENT TYPE: COMPLETE PEPTIDE
ORIGINAL SOURCE: SYNTHETIC
IMMEDIATE SOURCE: SYNTHETIC
PUBLICATION INFORMATION: NOT PREV
                                                                                                                                                                                                                                                                                                                                       TELEFAX: (S
                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
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                                                           27.8%; Score 60; DB 3; Length 37; Local Similarity 26.5%; Pred. No. 0.08; hes 9; Conservative 15, Minmarch.
                                                                                                                                                                                                                                                                      TYPE: AMINO ACID TOPOLOGY: LINEAR
                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE:
                                                                                                                                                                                                                                                                                                      LENGTH:
3 KKFVKKVAKVAKKVAKKVAKKVAKKVAKVAK 36
                               7 RRVVRRVRRVVRRVVRRVVRRVVRRVVRRVVR 40
                                                                                                                                                                                                                                                                                                                                       : (919)990-9531
(919)990-9532
DR SEQ ID NO: 2:
                                                                                                                                                 NOT PREVIOUSLY PUBLISHED
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                                                                Gaps
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Search completed: June 9, 2003, 12:05:07 Job time : 16.3404 secs

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US-08-505-486-23
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                                                                                                                                                                                                                                                                                                                                   Patent No. 5955573
GENERAL INFORMATION:
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APPLICATION NUMBER: US,
FILING DATE: 04-08-94
APPLICATION NUMBER: 08
FILING DATE: 06-04-93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: (919)990-9532
INFORMATION FOR SEQ ID NO: 23:
                                                                                                                                                                                                                                                APPLICANT: JESSE M.
TITLE OF INVENTION: U
TITLE OF INVENTION: U
TITLE OF INVENTION: U
NUMBER OF SEQUENCES:
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DESCRIPTION: PEPTIDE
HYPOTHETICAL: NO
FRAGMENT TYPE: COMPLETE PEPTIDE
ORIGINAL SOURCE: SYNTHETIC
IMMEDIATE SOURCE: SYNTHETIC
PUBLICATION INFORMATION: NOT PREVIOUSLY PUBLISHED
          SOFTWARE: WordPerfect 5.1+
CURRENT APPLICATION DATA:
* APPLICATION NUMBER: US/08/505,486
                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: DISKETTE, 3
COMPUTER: IBM COMPATIBLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELECOMMUNICATION INFORMATION:
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ATTORNEY/AGENT INFORMATION:
NAME: HULTQUIST, STEVEN J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION DATA:
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COMPUTER: AL-
COMPUTER: M.S. WC
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                                                      COMPUTER: IBM COMPONERATING SYSTEM:
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FILING DATE: 11-08-93
APPLICATION NUMBER: 0
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                                                                                                                                 20004
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                                                                                                                                                                                                 555 Thirteenth Street N.W.
                                                                                                                                                 USA
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                                                                                                                                                                                                                  ROTHWELL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (919)990-9531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DISKETTE,
21-JUL-1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27.8%;
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                                                                                                                                                                                                                                                                Jaynes
UBIQUTIN-LYTIC PEPTIDE FUSION GENE
CONSTRUCTS, PROTEIN PRODUCTS DERIVING THEREFROM,
METHODS OF MAKING AND USING SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US/08/225,476A
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                                                                                                                                                                                                                FIGG, ERNST & KURZ
                                                                                              3.5 INCH, 1.4 MB STORAGE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 60; DB 1; Length 37; Pred. No. 0.08;
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Sequence 23, App-
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GENERAL INFORMATION:
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Best Local Similarity 26.5%; Pred. No. 0.08;
Matches 9; Conservative 15; Mismatches
                                               FILING DATE: August 12, 1996
PRIOR APPLICATION DATA:
APPLICATION UNMEER: US 08/231,730
FILING DATE: April 20, 1994
PRIOR APPLICATION UNMEER: US 08/225,476
APPLICATION NUMBER: US 08/225,476
FILING DATE: April 8, 1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/039,620
FILING DATE: June 4, 1993
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
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FRAGMENT TYPE: COMPLETE PE
ORIGINAL SOURCE: SYNTHETIC
IMMEDIATE SOURCE: SYNTHETI
PUBLICATION INFORMATION: N
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                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
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APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                          SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
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PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS: ADDRESSEE: Rothwell,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 2
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                               MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REGISTRATION NUMBER: 35, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/08/689,489C FILING DATE: August 12, 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEPHONE:
              APPLICATION NUMBER: 08/148,889 FILING DATE: No. 6001805ember 8,
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                                                                                                                                                                                                                                                                                                                                                                                                             20004
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            E: Rothwell, Figg,
555 13TH STREET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (202) 783-6031
                                                                                                                                                                                                                                                                                                                                                                                                                                   USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Jesse M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (202) 783-6040
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Jaynes, Gordon R. Julian
Method of Enhancing Wound
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stimulating Fibraicon Vivo, Utilizing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      U.S.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NOT PREVIOUSLY PUBLISHED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        08/279,472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Enhancing Wound Healing 
ng Fibro-blast and Kerati
                    1993
                                                                                                                                                                                                                                                                                                                Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Amphipathic Peptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2; Length 37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Keratinocyte
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Query Match
Best Local Similarity
Watches 9; Conserve
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                                                            US-08-457-798-23
                                                                               RESULT 11
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                      Sequence 23, App...
No. 5744445
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            atent No. 5744445
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   atent No.
                                                                                                                                                                                                                                                                                                                                               TELEFAX: (202)783-6031
INFORMATION FOR SEQ ID NO: 23:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: JULIAN, GORDO
TITLE OF INVENTION: METH
TITLE OF INVENTION: AND
NUMBER OF SEQUENCES: 38
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                            TYPE: AMINO ACID
TOPOLOGY: LINEAR
MOLECULE TYPE: PEPI
                                                                                                                                                                                                                                                                                                                                                                                              REGISTRATION NUMBER: 35,400
REFERENCE/DOCKET NUMBER: 200
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 783-6040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: U.S.08/148,889
FILING DATE: 08-NOV-93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION DATA:
APPLICATION NUMBER: US
FILING DATE: 24-APR-95
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IMMEDIATE SOURCE: SYNTHETIC
PUBLICATION INFORMATION: NOT PREVIOUSLY PUBLISHED
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
NAME: WALKER, BARBARA W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM: MEDIUM TYPE: DISKETT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity nes 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM COMPATI
OPERATING SYSTEM: DOS
SOFTWARE: WordPerfect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23, Application US/08427001C
o. 5717064
                                                                                                                                             7 RRVVRRVVRRVVRVVRVVRRVVRRVVRRVVR 40
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                                                                                                                             KKFVKKVAKVAKKVAKKVAKKVAKKVAKVAK 36
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ص
                                            Application US/08457798
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555 Thirteenth Street, N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DISKETTE, 3.5 INCH, 1.4 MB STORAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GORDON R.
                                                                                                                                                                                                            27.8%; Score 60; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  METHYLATED LYSINE-RICH LYTIC PEPTIDES, AND METHOD OF MAKING THE SAME BY REDUCTIVE ALKYLATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27.8%; Score 60; DB 1 26.5%; Pred. No. 0.08;
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US-08-457-171-23
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                                                                                                                                                                                                                                                                                                                                                                                                                Matches
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Best Local (
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ZIP: 27601
COMPUTER READABLE FORM:
COMPUTER: DISKETTE, 3.5 INCH
MEDIUM TYPE: DISKETTE, 3.5 INCH
MEDIUM TYPER: APPLE MACINTOSH
TYPER: APPLE MACINTOSH
                                                                                                                                                                                                                         GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FRAGMENT TYPE: COMPLETE PEPTIDE
ORIGINAL SOURCE: SYNTHETIC
IMMEDIATE SOURCE: SYNTHETIC
PUBLICATION INFORMATION: NOT PREVIOUSLY PUBLISHED
                                                                                                                                                                                  APPLICANT: JAYNES, APPLICANT: JULIAN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: U
FILING DATE: 19930604
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DESCRIPTION:
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LENGTH: 37
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NAME: HULTQUIST, STEVEN J.
REGISTRATION NUMBER: 28021
REFERENCE/DOCKET NUMBER: 4
                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: M.S. WORD 5.0 CURRENT APPLICATION DATA:
                                                                                                                                                     TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION: TELEPHONE: (919)990-9531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: 150
CITY: RALEIGH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
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COUNTRY: US
ZIP: 27709
                                                               ADDRESSEE: STEVEN J. HULTQUIST
ADDRESSEE: INTELLECTUAL PROPERTY/1
STREET: 200 PARK DRIVE, SUITE 210
STREET: P.O. BOX 14329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: FILING DATE: CLASSIFICATION: 514
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ADDRESSEE: DEMETER BIOTECHNOLOGIES, LTD.
STREET: 150 FAYETTEVILLE ST. MALL, SUITE 2700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                           3 KKFVKKVAKVAKKVAKKVAKKVAKKVAKVAK 36
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                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity 26.5%; Pred. No.
                                                    RESEARCH TRIANGLE PARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AMINO ACID
                                 NORTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NORTH CAROLINA
                                                                                                                                                                                                                                                       Application US/08457171
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                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PEPTIDE
                                                                                                                                                                                      GORDON R.
                                                                                                                                                                                                      JESSE M.
                                                                                                                                                                    METHOD OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AMPHIPATHIC PEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                METHOD OF TREATING PULMONARY DISEASE STATES WITH NON-NATURALLY OCCURRING
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                                                                                                     PROPERTY/TECHNOLOGY LAW
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                                                                                                                                                                    COMBATTING MAMMALIAN NEOPLASIA,
                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 1; Length 37;
                                                                                                                                                                                                                                                                                                                                                                                                              10;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -08-932-682-160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         equence 160, Application US/08932682 atent No. 5945507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: amino acid
                                                                                                                    OPERATING SYSTEM: MS-DOS
SOFTWARE: FastSEQ Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/932,682
FILING DATE: 18-SEP-1997
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PRIOR APPLICATION DATA:
APPLICATION UMBER: 60/0:
PILLING DATE: 26-JAN-1996
ATTORNEY/AGENT INFORMATION:
                                                                                   PRIOR APPLICATION DATA:
                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION:
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MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                       PPELICANT: Mietzner, Timothy A.
PPELICANT: MIETZNER, TIMOTHY A.
PROP INVENTION: NOVEL ANTIMICROBIAL PEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                    PPLICANT: Ronald, Montelaro C.
PPLICANT: Tencza, Sarah B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28.7%;
Local Similarity 42.9%;
hes 12; Conservation
APPLICATION NUMBER: 08/78 FILLING DATE: 24-JAN-1997 FORNEY/AGENT INFORMATION: NAME: Rochelle K. Seide REGISTRATION NUMBER: 32,:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS:
                                                                                                                                                                                                                                                              COUNTRY: USA
ZIP: 10112-0228
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SOFTWARE: FastSEQ Version 2.0
                                                                                                         CLASSIFICATION:
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                                                                                                                                                                                                                                                                                                                   CITY: New York
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                                                                                                                                                                                                                                                                                                 New York
                                                                                                                                                                                                                                                                                                                                  3: BAKER & BOTTS, L.L.P
30 Rockefeller Plaza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                212-765-2519
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Pred. No. 0.034;
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Best Local Similarity
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MEDIUM TYPE: DISKETT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
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PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION DATA:
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                                       MOLECULE TYPE:
                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                              TELEPHONE: (919)990-9531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           בברים במינים במ
                                                                                                                                                                                                                                                                                                                                               REGISTRATION NUMBER: 28 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US/01
FILING DATE: 04-20-94
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: 200 PARK DRIVE, SUITE STREET: P.O. BOX 14329
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                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 0
FILING DATE: 11-08-93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 06-04
APPLICATION NUMBER:
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APPLICATION NUMBER:
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   DESCRIPTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
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nilarity 42.9%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GORDON R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           METHOD OF ENHANCING WOUND HEALING BY STIMULATING FIBROBLAST AN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MACINTOSH
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Pred. No. 0
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COMPLETE PEPTIDE

PRIOR APPLICATION DATA:

PPLICATION NUMBER:

08/079,512

ATTORNEY/AGENT INFORMATION:

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 Query Match
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Best Local (
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APPLICANT: Rao, Guturaj A.
APPLICANT: Zhong, Lingxiu
TITLE OF INVENTION: SYNTHETIC ANTIMICROBIAL PEPTIDES
NUMBER OF SEQUENCES: 22
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                                                                                                                                           TELEPHONE: (515) 248-48
TELEFAX: (515) 334-6883
INFORMATION FOR SEQ ID NO:
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REGISTRATION NUMBER: 29,342
REFERENCE/DOCKET NUMBER: 02:
TELECOMMUNICATION INFORMATION:
                                             TOPOLOGY: 1: MOLECULE TYPE:
                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 31 amino acids
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APPLICATION NUMBER: US 08/079,512
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                                                                             STRANDEDNESS
                                                                                                                                                                                                                                                                                                                                                                             MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOPTWARE: Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                           NAME: Bobrowicz, Donna
REGISTRATION NUMBER: 3
                                                                                                                                                                                                                                                                                                                     CLASSIFICATION: 530
                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/0 FILING DATE: 12-MAY-1995
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(515) 245-3634
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Score 64;
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Pred. No. 0.021;
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DB 1;
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Length 31;
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                                                                                                                                          Sequence 160, Application US/08786748A Patent No. 5714577
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: (515) 248-4844
INFORMATION FOR SEQ ID NO:
                             NUMBER OF SEQUENCES: 1
                                                                              APPLICANT: Ronald, APPLICANT: Tencza, APPLICANT: Mietzner
                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE:
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ATTORNEY/AGENT INFORMATION:
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                                                          APPLICANT: Mietzner, Timothy A.
TITLE OF INVENTION: NOVEL ANTIMICROBIAL PEPTIDES
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                 ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Yates, Michael E.; Sweeney, Patricia A.; Roth, Michael J.; & Simon, Soma G.
E: Brumbaugh, Graves, Donohue & Raymond
30 Rockefeller Plaza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        E: Pioneer Hi-Bred International, Inc 700 Capital Square, 400 Locust Street
                                                                                                                                                                                                                                                                                                                                                                                                                                             31 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pioneer Hi-Bred International, Inc. VENTION: SYNTHETIC ANTIMICROBIAL PEPTIDES
                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            United States
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                                                                                           Montelaro C.
Sarah B.
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Pred. No. 0.
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; TITLE: N/A
US-08-436-703B-17
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                                                                                                                                                                                                                                             US-08-436-703B-5
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Best Local Similarity 48.6%;
Matches 18; Conservative
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Best Local Similarity
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                                                                                                                                                                                                         Sequence 5, Appli
Patent No. 591976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Mueller, Joachim
APPLICANT: Reichenbach, Hans
TITLE OF INVENTION: DNA sequences for enzymatic synthesis of polyketide or
TITLE OF INVENTION: heteropolyketide compounds
FILE REFERENCE: PCT/US 99/23535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/413,814
CURRENT FILING DATE: 1999-10-07
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                                                                                                                                                                                          GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Dougherty, Brian A APPLICANT: Goldberg, Steven L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Gesellschaft fuer Biotechnologische Forschung mbH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EARLIER FILING DATE: 1998-10-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EARLIER APPLICATION NUMBER: DE 198 46 493.2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT ORGANISM: Sorangium cellulosum
                                                     APPLICANT: Stanley,
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
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                                       MBER OF SEQUENCES:
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                                                                                                                                                                                                                           Application US/08436703B
                                                                 Stanley, James C.
VENTION: NOVEL PEPTIDES FOR
VENTION: HEPARIN AND LOW MOLECULAR
VENTION: WEIGHT HEPARIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                Andrews, Philip
                                                                                                                                                                    Wakefield, Thomas W.
Benita J, Rohm, Esq
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Patent No. 5607914
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                                                                                                                                                                       TITLE OF INVENTION: SYNTHETIC ANTIMICROBIAL PEPT MUMBER OF SEQUENCES: 22
CORRESPONDENCE ADDRESS:
ADDRESSEE: Pioneer Hi-Bred International, Inc.
STREET: 700 Capital Square, 400 Locust Street
CITY: Des Moines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: N/A PUBLICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: N/A MOLECULE TYPE: ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS LENGTH: 39 amino acid
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APPLICATION NUMBER: N/A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                           SOFTWARE: Microsoft Windows No. 5607914epad CURRENT APPLICATION DATA:
                                                                                         COMPUTER READABLE FORM: MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION: TELEPHONE: 313-965-1976
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OPERATING SYSTEM:
SOFTWARE: WORDER
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REGISTRATION NUMBER: 28
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: 6601 Woodward Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
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                                                         COMPUTER: IBM Compatibl
OPERATING SYSTEM: MS-DC
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             APPLICATION NUMBER: US/08/179,632
                                                                                                                                         COUNTRY:
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17; Conserva
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Michigan
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ilarity 50.0%;
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                                                                                                                                                                                                                                                          Rao, A. Gururaj; Zhong, Lingxiu
VENTION: SYNTHETIC ANTIMICROBIAL
                                                                                                                                          United States
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N/A
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                                                                                           Diskette,
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Maximum Match 100%
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Maximum DB seq length: 200000000
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             derived by analysis of the total score distribution.
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Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/1/iaa/backfiles1.pep:*
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          BB
                            US-08-786-748A-160
US-08-913-682-160
US-08-913-730A-23
US-08-457-798-23
US-08-457-171-23
US-08-457-171-23
US-08-689-486-23
US-08-689-489-23
US-09-340-154-23
US-09-340-154-23
US-09-340-154-23
US-09-32-802A-23
US-09-32-802A-23
US-09-32-6118-23
PCT-US94-1255-0-23
PCT-US95-04315-23
PCT-US95-04315-23
PCT-US95-04315-23
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US-09-413-814-78

US-08-436-703B-5

US-08-179-632-9

US-08-440-174A-9

PCT-US95-00062-9
          US-08-932-682-18
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          262574
Sequence 17, Appl Sequence 5, Appli Sequence 9, Appli Sequence 9, Appli Sequence 9, Appli Sequence 160, App Sequence 23, Appli Sequence 24, Appli Sequence 25, Appli Sequence 26, Appli Sequence 27, Appli Sequence 28, Appli 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Description
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| 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 |
| 26.4 | 26.4 | 26.4 | 26.4 | 26.4 | 26.4 | 26.4 | 26.4 | 26.4 | 26.4 | 26.4 | 26.4 | 26.4 | 26.4 | 26.4 | 26.4 | 26.4 | 26.9 |
| 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 27 | 27 | 27 | 27 | 27 | 27 | 96 |
| N | N | N | N | ۳ | _ | - | - | μ | ۲ | ,_ | ഗ | տ | 4. | ω | w | N | N |
| US-08-932-682-27 | US-08-932-682-24 | 2-682- | US-08-932-682-14 | US-08-786-748A-48 | US-08-786-748A-46 | US-08-786-748A-43 | US-08-786-748A-27 | US-08-786-748A-24 | US-08-786-748A-19 | US-08-786-748A-14 | PCT-US95-09339-65 | PCT-US95-09338-65 | US-09-482-611B-65 | US-09-340-154-65 | US-08-801-028-65 | US-08-505-486-65 | US-08-668-255-7 |
| • | Sequence 24, | • | • | Sequence 48, | • | • | • | • | • | • | • | • | • | • | • | Sequence 65, | Sequence 7, Ap |
| Appl | Appl | Appl | Appl | App1 | Appl | Appl | App1 | App1 | Appl | Appl | App1 | Appl | Appl | Appl | App1 | App1 | ppli |

ALIGNMENTS

| CKET NUMBER: 7WK- ION INFORMATION: 313-965-1951 32-965-1951 3EQ ID NO: 17: SEQ ID NO: 17: CTERIOTICS: amino acids acid acid i N/A /A /A /A /Peptide g: | APPLICATION NUMBER: US/08/436,703B FILING DATE: 08-MAY-1995 CLASSIFICATION: 514 PRIOR APPLICATION DATA: APPLICATION NUMBER: N/A FILING DATE: N/A ATTORNEY/AGENT INFORMATION: NAME: Rohm, Benita J. REGISTRATION NUMBER: 28,664 | ates of America M: Y disk 1.44Mb, ompatible MS-DOS ect 6; OS)Text ATA: | JS-08-436-703B-17 Sequence 17, Application US/08436703B Patent No. 5919761 GENERAL INFORMATION: APPLICANT: Wakefield, Thomas W. APPLICANT: Wakefield, Thomas W. APPLICANT: Stanley, James C. TITLE OF INVENTION: NOVEL PEPFIDES: ITTLE OF INVENTION: WEIGHT HEPARIN NUD LOW TITLE OF INVENTION: WEIGHT HEPARIN TITLE OF INVENTION: ANTICOAGULATION UNMBER OF SEQUENCES: 18 CORRESPONDENCE ADDRESS: ADDRESSEE: Benita J, Rohm, Esq. STREET: Suite 1525 |
|--|--|---|---|
| <-060548-00233 | 36, 703B | nerica 14Mb, 3.5" | 703B W. FIDES FOR FOR MOLECULAR PARIN LATION REVERSAL BEGG. |



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Query Match
Best Local Similarity 38.3.,
"heches 23; Conservative
Search completed: June 9, 2003, 12:31:36 Job time: 63.1277 secs
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                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS: 30992
; SEQ ID NO 13263
; LENGTH: 123
; TYPE: PRT
; ORGANISM: Propioni acnes
PCT-US02-32727-13263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 15
PCT-US02-32727-13263
; Sequence 13263, Application PC/TUS0232727
; GENERAL INFORMATION:
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                                                                                                                                                                                             Query Match 28.0%;
Best Local Similarity 34.3%;
Matches 23; Conservative
                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Benson, Darin
APPLICANT: Jones, Robert
APPLICANT: Carter, Darrick
APPLICANT: Barth, Brenda
APPLICANT: Bouglass, John
APPLICANT: Douglass, John
TITLE OP INVENTION: Compositions and Methods for the Therapy and Diagnosis of Acnes
FILE REFERENCE: 210121.514C1
CURRENT APPLICATION NUMBER: PCT/US02/32727
CURRENT FILING DATE: 2002-10-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Mitcham, Jennifer
APPLICANT: Skeiky, Yasir
APPLICANT: Persing, David
APPLICANT: Bhatia, Ajay
APPLICANT: Maisonmeuve, Jean Francois
                                                                81 RRRIIRR 87
                                                                                             43 -RRVVRR 48
                                                                                                                               Zhang, Yanni
Wang, Siqing
Jen, Shyian
Lodes, Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28.2%; Score 61; DB 6; Length 79; 38.3%; Pred. No. 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11; Mismatches
                                                                                                                                                                                        9;
                                                                                                                                                                                                             Score 60.5; DB 1; Length 123; Pred. No. 28;
                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10; Indels 16;
                                                                                                                                                                                             16; Indels 19; Gaps
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US-10-276-781-1853

Sequence 1853,

Application US/10276781

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RESULT 13
US-10-017-161-2050
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US-10-156-761-14485
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US-10-276-781-1853
                                                                                                                                                                                                                                                                                                                                                                                                                  ; ORGANISM: Streptomyces avermitilis US-10-156-761-14485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: ISHIKAWA, JUN
APPLICANT: HORIKAWA, HIROSHI
APPLICANT: SHIBA, TADAYOSHI
APPLICANT: SAKAKI, YOSHIYUKI
APPLICANT: HATTORI, WASAHIRA
TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
FILE REFERENCE: 249-262
CURRENT APPLICATION NUMBER: US/10/156,761
CURRENT FILING DATE: 2002-05-29
PRIOR APPLICATION NUMBER: JP 2001-204089
                                                     Sequence 2050, Application US
GENERAL INFORMATION:
APPLICANT: SUMA, MAKIKO
APPLICANT: ASAI, KIYOSHI
APPLECANT: AKIYAMA, YUTAKA
APPLECANT: AKIYAMA, YUTAKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 14485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 14485, Application US/10156761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
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                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Hyseq, Inc.
APPLICANT: Tang et al.
TITLE OF INVENTION: Novel Nucleic Acids and Polypeptides
FILE REFERENCE: 21272-018 (785 contig)
CURRENT APPLICATION NUMBER: US/10/276,781
CURRENT FILING DATE: 2002-11-18
PRIOR APPLICATION NUMBER: 09/491,404
PRIOR PILING DATE: 2000-01-25
NUMBER OF SEQ ID NOS: 2018
SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: JP 2001-272697 PRIOR FILING DATE: 2001-08-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 15109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 2001-05-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
APPLICANT: ABURATANI, HIROYUKI
TITLE OF INVENTION: NOVEL G PROTEIN-COUPLED RECEPTORS
FILE REFERENCE: 084335/0152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ENGTH: 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               / Match 29.6%;
Local Similarity 57.4%;
les 27; Conservative
                                                                                                                                                                                                                                                                                                                                                     Local Similarity
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                                                                                                                                                                                                                                                                                       RVVRRVRRVVRRVVRRVVRRVRR 33
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                                                                                                                                                                                                                                                RALRRERRIRROTRVAERAQERIRR 195
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                                                                                                                                           Application US/10017161
                                                                                                                                                                                                                                                                                                                                  Conservative
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Pred. No. 13;
3; Mismatches 9; Indels
                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                   Score 62; DB
Pred. No. 32;
                                                                                                                                                                                                                                                                                                                                                                         DB 6; Length 205;
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NUMBER OF SEQ ID NOS: 2430
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 2050
LENGTH: 450
TYPE: PRI
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; SEQUENCE DESCRIPTION: SEQ ID NO: 7073: US-10-417-884-7073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-417-884-7073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; ORGANISM: Homo sapiens
US-10-017-161-2050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S-10-417-884-7073
Sequence 7073, Application US/10417884
Sequence 7073, Application US/10417884
GENERAL INFORMATION: A Doucette-Stamm and David Bush
APPLICANT: Lynn A Doucette-Stamm and David Bush
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO
ENTEROCOCCUS FAECIUM FOR DIAGNOSTICS AND THERAPEUT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/10/017,161
CURRENT FILING DATE: 2002-12-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: JP PRIOR FILING DATE: 2001-06-16
                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO: 7073: SEQUENCE CHARACTERISTICS: LENGTH: 79 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/09/107,532A

FILING DATE: 30.7un-1998

APPLICATION NUMBER: 60/085,598

FILING DATE: 14 May 1998

APPLICATION NUMBER: 60/051571

FILING DATE: JULY 2, 1997

ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OPERATING SYSTEM: <Unknown>
SOFTWARE: ASCII
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM: MEDIUM TYPE: CD/RO
                                                                                                                                         MOLECULE TYPE: protein HYPOTHETICAL: YES
                                                                                                                                                                                                                                                                                                                          TELECOMMUNICATION INFORMATION:
                                                                                FEATURE:
                                                                                                                      ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              177 VVRVMIVVMVVMVVVVSVVIVVRVMVRVVRVMVMTVVVMVMMVM 221
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                         TELEPHONE: (781) 893-8277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/10/417,884
FILING DATE: 17-Apr-2003
                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: GTC-012
                                                                                                                                                                                                                                                                                                                                                                NAME: Ariniello, Pamela Deneke REGISTRATION NUMBER: 40,489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STATE: Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET:
                                                             NAME/KEY:
                                                                                              ORGANISM: Enterococcus faecium
                                                                                                                                                                             TOPOLOGY: linear
                                                                                                                                                                                                  TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Waltham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE: GENOME THERAPEUTICS CORPORATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28.7%;
ilarity 48.9%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100 Beaver Street
                                   misc feature (B) LOCATION 1.
                                                                                                                                                                                                                                                                                                         (781)893-5007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CD/ROM ISO9660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001/246789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 62; DB of Pred. No. 68; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 6; Length 450;
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US-10-366-683-24636
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                                                                                                                                                                                                                                                       Sequence 24636, Application US/10419128
GENERAL INFORMATION:
APPLICANT: MARC J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS
FILE REFERENCE: 107196.136
                                                                   SEQ ID NO 24636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS: 33142
SEQ ID NO 24636
LENGTH: 1374
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                                                                                                                                                         PRIOR APPLICATION NUMBER: US/09/252,991
PRIOR FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 09/252,991
PRIOR FILING DATE: 1999-02-10
NUMBER OF CT
                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/10/419,128
CURRENT FILING DATE: 2003-04-21
                                                                                                       PRIOR APPLICATION NUMBER: US 60/094,190 PRIOR FILING DATE: 1998-07-27
                                                                                                                                            PRIOR FILING DATE: 1998-02-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/10/366,683 CURRENT FILING DATE: 2003-02-13
10-419-128-24636
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             ORGANISM: Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION: Clone ID: PAT_MRT3847_30254C.1.pep
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LOCATION: (1)..(
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PPLICANT: Deloughery, Craig
PPLICANT: Bush, David
ITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID
ITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS
ILE REFERENCE: PATHO3-04
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22; Conserv
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                                                                                      SEQ ID NOS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
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Pred. No. 87;
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                                                                                                                                                                         SEQ ID NO 30124
LENGTH: 258
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 30124, Application US/10419128
GENERAL INFORMATION:
APPLICANT: Marc J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 30124
LENGTH: 258
TYPE: PRT
                                                                    Matches
                                                                                      Best Local
                                                                                                    Query Match
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Best Local Similarity
                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: US 60/094,190 PRIOR FILING DATE: 1998-07-27
                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: US/09/252,991
PRIOR FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
                                                                                                                                                                                                                                                                                                                                                  FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/10/419,128
CURRENT FILING DATE: 2003-04-21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/10/366,683
CURRENT FILING DATE: 2003-02-13
PRIOR APPLICATION NUMBER: 09/252,991
PRIOR FILING DATE: 1999-02-18
PRIOR FILING DATE: 1999-02-18
                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Rubenfield, Marc J.
                                                                                                                                                         ORGANISM: Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26 RTVVRRMRRAALPGAAPVRCRTTPGRRIPRRAKRCRHRVRRAGSRAVER
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                                  6 VRRVVRRVRRVVRRVV-RVVRRVVRRVRR 33
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                                                                                      Similarity
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RTVVRRMRRAALPGAAPVRCRTTPGRRIPRRARRCRHRVRRAGSRAVER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bush
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Bush, David
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                                                                    Conservative
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42.9%; Pred. No. 23;
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                                                                                    Score 64.5;
Pred. No. 2
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Pred. No. 87;
                                                                    Mismatches
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                                                                                                    Length 258;
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                                                                    Indels
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APPLICANT: Cao, Yongwei
ITITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
FILE REFERENCE: 38-21(53313)8
CURRENT APPLICATION NUMBER: US/10/425,114
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 73128
SEQ ID NO 68745
LENGTH: 290
TYPE: TIPE
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US-10-425-114-68746
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LENGTH: 226
                                                                                                                  Sequence 59258, Application GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                               APPLICANT: Liu, Jingdong APPLICANT: Zhou, Yihua
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/10/425,114
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 73128
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                                                 APPLYCANT:
                                                                   APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
OTHER INFORMATION: Clone ID: LIB3598-021-G1_FLI.pep
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Oryza sativa nipponbare
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INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
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                          Zhou, Yihua
Kovalic, David K.
Screen, Steven E
Tabaska, Jack E
                                                                                                                                                                                                                                                                                        RLRRLPRGVLRRLRLLPRRVLRRAGLPLRRLLGLPRLLLAGRLRLLPRRVLRRPGLLRRGV 132
                                                                                                                                                                                                                                                                                                                                                         Conservative
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Pred. No. 1.8;
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; OTHER INFORMATION: Clone ID: UC-ZMFLMO17036D06_FLI.pep
US-10-425-114-59258
                                                                                                                                                                                                                                                              US-10-424-599-208445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; OTHER INFORMATION: Shiva-4 peptide. US-09-874-644A-17
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              APPLICANT: La Rosa Thomas J
APPLICANT: Kovalic David K
APPLICANT: Zhou Yihua
APPLICANT: Cao Yongwei
TITLE OF INVENTION: Soy Nucleic Acid Molecul
TITLE OF INVENTION: Plants and Uses Thereof
FILE REFERENCE: 38-21 (53223)B
CURRENT APPLICATION NUMBER: US/10/424,599
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 285684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/09/874,644A
CURRENT FILING DATE: 2001-06-05
PRIOR APPLICATION NUMBER: US 09/238,240
PRIOR FILING DATE: 1999-01-27
NUMBER OF SEQ ID NOS: 61
SOFTWARE: Patentin version 3.1
SEQ ID NO 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 27; Conserv
                                                                                                                                                                                                                     Sequence 208445, Application US/10424599 GENERAL INFORMATION:
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LENGTH: 229
SEQ ID NO 208445
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Best Local S
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APPLICANT: Derrick, Kenneth S
TITLE OF INVENTION: Plants Genetically Enhanced
FILE REFERENCE: MA-REIID1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/1
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 73128
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 28
TYPE: PRT
ORGANISM: Artificial Sequence
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ORGANISM: Zea mays
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Pred. No. 2
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Result
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             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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1: /cgn2_6/ptodata/1/paa/PCT_NEW_COMB.pep:*

2: /cgn2_6/ptodata/1/paa/US06_NEW_COMB.pep:*

3: /cgn2_6/ptodata/1/paa/US07_NEW_COMB.pep:*

4: /cgn2_6/ptodata/1/paa/US08_NEW_COMB.pep:*

5: /cgn2_6/ptodata/1/paa/US08_NEW_COMB.pep:*

6: /cgn2_6/ptodata/1/paa/US09_NEW_COMB.pep:*

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173.908 Million cell
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   US-10-419-128-24636
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US-10-276-781-1883
US-10-156-761-14485
US-10-17-884-7073
US-10-17-884-7073
PCT-US02-32727-13263
US-10-438-246-17997
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US-10-438-246-1795
US-10-438-246-1795
US-10-438-246-18748
US-10-425-114-38005
US-10-425-114-55011
US-10-426-114-65011
US-10-436-683-24104
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US-09-874-644A-17
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Sequence 68747, A
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Sequence 30124, A
Sequence 30124, A
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|--|--|---------------------|------|---------------------|------|---------------------|------|----------------------|---------------------|---------------------|------|----------------------|----------------------|--------|------|---------------------|---------------------|------|------|---------------------|
| | 9 179 5 US-09-675-784A-7224 Sequence 9 331 6 US-10-282-122A-50182 Sequence 9 742 6 US-10-366-683-29239 Sequence 9 742 6 US-10-419-128-29239 Sequence 9 1043 6 US-10-282-122A-50102 Sequence 9 1043 6 US-10-425-114-56931 Sequence 6 125 6 US-10-425-91-61227 Sequence 6 612 6 US-10-424-599-161227 Sequence 6 630 6 US-10-424-599-161230 Sequence 6 630 6 US-10-425-122A-48107 Sequence 6 630 6 US-10-425-114-75501 Sequence 6 136 6 US-10-425-114-70188 Sequence 6 14 64 6 US-10-425-114-7999 Sequence 6 13 6 US-10-282-122A-47999 Sequence 6 13 6 US-10-282-122A-4999 Sequence 1 13 6 US-10-366-683-23880 Sequence 2 13 6 US-10-366-683-23880 Sequence 1 13 6 US-10-425-114-33880 Sequence 1 15 0 US-10-425-114-33959 Sequence 1 15 0 US-10-425-114-33059 Sequence | 56.5 | 56.5 | 56.5 | 56.5 | 56.5 | 57 | 57 | 57 | 57 | 57 | 57.5 | 57.5 | 57.5 | 58 | 58 | 58 | | | 0 |
| | SUS-10-119-120-24104 SUS-10-282-122A-50182 Sequence SUS-10-366-683-29339 Sequence GUS-10-366-683-29339 Sequence GUS-10-419-1128-29239 Sequence GUS-10-425-114-56931 Sequence GUS-10-424-599-161230 Sequence GUS-10-424-599-161230 Sequence GUS-10-425-114-65501 Sequence GUS-10-425-114-65501 Sequence GUS-10-425-114-65501 Sequence GUS-10-425-114-65501 Sequence GUS-10-365-683-23880 Sequence GUS-10-425-114-38341 Sequence GUS-10-425-114-38341 Sequence GUS-10-425-114-38341 Sequence GUS-10-425-114-38341 Sequence GUS-10-425-114-38341 Sequence | 26.2 | 26.2 | 26.2 | 26.2 | 26.2 | 26.4 | 26.4 | 26.4 | 26.4 | 26.4 | 26.6 | 26.6 | 26.6 | 26.9 | 26.9 | 26.9 | 26.9 | 26.9 | |
| | US-09-675-784A-722A US-09-675-784A-722A US-09-675-784A-722A US-09-675-784A-722A US-09-675-784A-722A US-09-675-784A-722A US-09-675-784A-59182 US-10-421-122A-59102 US-10-424-599-161227 US-10-424-599-161227 US-10-424-599-161230 US-10-424-599-161230 US-10-425-114-65501 US-10-425-114-70188 US-10-425-114-70188 US-10-425-114-3834 US-10-425-114-38340 US-10-425-114-38341 US-10-425-114-38341 US-10-425-114-38341 US-10-425-114-38341 US-10-425-114-38341 US-10-425-114-38341 US-10-425-114-38361 | 350 | 151 | 147 | 133 | 133 | 759 | 720 | 646 | 381 | 365 | 630 | 612 | 165 | 1043 | 742 | 742 | 331 | 179 | 0 40 |
| | -09-675-784A-722A Sequence -10-282-122A-50182 Sequence -10-419-128-29239 Sequence -10-419-128-29239 Sequence -10-425-114-56931 Sequence -10-424-599-161227 Sequence -10-424-599-161230 Sequence -10-424-599-161230 Sequence -10-425-114-65501 Sequence -10-425-114-65501 Sequence -10-425-114-65501 Sequence -10-425-114-70188 Sequence -10-425-114-70188 Sequence -10-366-683-23880 Sequence -10-419-128-23880 Sequence -10-425-114-38341 Sequence -10-425-114-38341 Sequence | σ | 9 | σ | σ | σ | 7 | σ | σ | 9 | σ | თ | σ | σ | თ | σ | 9 | σ | ŋ | đ |
| | | US-10-425-114-73059 | | US-10-425-114-69755 | | US-10-366-683-23880 | | US-10-282-122A-47999 | US-10-425-114-70188 | US-10-425-114-65501 | | US-10-424-599-161230 | US-10-424-599-161227 | | | US-10-419-128-29239 | US-10-366-683-29239 | | | CO-10-413-120-24104 |

ALIGNMENTS

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RESULT 2
US-10-425-114-68746
; Sequence 68746, Application US/10425114
; GENERAL INFORMATION:
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APPLICANT: Tabaska, Jack E
APPLICANT: Tabaska, Jack E
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(53313)
CURRENT APPLICATION NUMBER: US/10/425,114
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 73128
SEQ ID NO 68747
LENGTH: 220
TYPE: PRT
APPLICANT: Liu, Jingdong
APPLICANT: Liu, Jingdong
APPLICANT: Zhou, Yihua
APPLICANT: Kovalic, David K.
APPLICANT: Screen, Steven E
APPLICANT: Tabaska, Jack E
APPLICANT: Tabaska, Jack E
APPLICANT: Cao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
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Best Local (
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APPLICANT: Zhou, Yihua
APPLICANT: Kovalic, Dav
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Kovalic, David K
Screen, Steven E
Tabaska, Jack E
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Pred. No.
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Sequence 12, Application PC/TUS0204812

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US-09-785-058-12
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                                                                                                                                                                                                                                                                                           RESULT 14
US-09-785-059-12
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US-09-785-058-12
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                                                                        CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 12
                                                                                                                                                                     Sequence 12, Application US/09785059
GENERAL INFORMATION:
APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 12, Application US/09785058 GENERAL INFORMATION:
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Best Local Similarity
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 12
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SOFTWARE: FRAKTSEQ for Windows Version 3.0
SEQ ID NO 12
LENGTH: 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
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CURRENT FILING DATE: 2002-02-19
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APPLICANT: Timothy A. Mietzaer
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A34001-PCT / 072396.0223
                                      TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Artifical sequence FEATURE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
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                      ORGANISM: Artifical sequence
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EATURE: 😜
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90.9%;
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Pred. No. 1.1e-13;
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CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
SOPTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 12
LENGTH: 48
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
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Search completed: June Job time : 207.83 secs
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US-09-785-059-12
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US-10-079-075-12
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                                                                                                                                              Query Match
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Best Local Similarity
                                                                                                                  Matches
                                                                                                                                 Best Local Similarity
                                                                                                                                                                                                                                                                                                                                       APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
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                                                                                                                  Conservative
                                                                                                                                78.7%;
90.9%;
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                                                                                                                                Score 170; DB 24;
Pred. No. 1.1e-13;
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Pred. No. 1.1e-13;
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Best Local S
Matches 42
                                                      CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 7
                                                                                                                                             Sequence 7, Application US/09785059
GENERAL INFORMATION:
APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
FILE REFERENCE: A33577 / 072396.0217
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 7
LENGTH: 42
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE A34001-PCT / 072396.0223
CURRENT APPLICATION NUMBER: PCT/US02/04812
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ENERAL INFORMATION OF THE PROPERTY OF THE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES TITLE OF INVENTE: A 34001 / 072396.0222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILE REFERENCE: A 34001 / 072396.0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Ronald C. APPLICANT: Timothy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
ORGANISM: Artifical sequence
FEATURE:
OTHER INFORMATION: Artificial peptide derived from HIV-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
ORGANISM: Artifical sequence
                     TYPE: PRT
                                        ENGTH: 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION: Artificial peptide derived from HIV-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ENGTH: 42
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Pred. No. 3.4e-16;
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Pred. No. 3.4e-16;
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US-10-079-075-7
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                                                                                                                    ; OTHER INFORMATION: artificial PCT-US02-04432-12
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GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: FORMATION: Wietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A34001-PCT / 072396.0223
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Best Local
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Best Local Similarity
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Best Local Similarity
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                       CURRENT FILING DATE:
NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: PCT/US02/04432
                                                                                                                                                                                                                         SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                FEATURE:
                                                                                                                                                                            LENGTH: 48
TYPE: PRT
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TYPE: PRT
ORGANISM: Artificial Sequence
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Pred. No. 3.4e-16;
                                                                       Score 170; DB 1;
Pred. No. 1.1e-13;
                                                                                                                                peptides derived from HIV-1
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RESULT 12 PCT-US02-04812-12

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GENERAL INFORMATION:
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Best Local Similarity
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LENGTH: 48
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LENGTH: 48
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TITLE OF INVENTION: VIRUS DERLVED ANTIMICROBIAL
FILE REFERENCE: A34001-PCT / 072396.0223
CURRENT APPLICATION NUMBER: PCT/US02/04812
CURRENT FILING DATE: 2002-02-19
                                                                    APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REPERENCE: A33577 / 072396.0217
CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
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SOFTWARE: FastSEQ for Windows Version 3.0
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                                    SOFTWARE:
                                                     NUMBER OF SEQ ID NOS: 12
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Pred. No. 2.7e-19
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Pred. No. 2.7e-19;
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                                                                                                       PCT-US02-04432-7
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                                                                                                                                                          SOFTWARE: PASTSEQ for Windows Version 3.0 SEQ ID NO 7 LENGTH: 42 TYPE: PRT
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Best Local Similarity
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Best Local Similarity
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CURRENT APPLICATION NUMBER: PCT/US02/04432
CURRENT FILING DATE: 2002-02-13
NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A34001-A / 072396.0222
                                                                                                                                                                                                                                                                                   APPLICANT: Ronald APPLICANT: Timoth
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ORGANISM: Artificial
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TILE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
                                                                  Local
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Pred. No.
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Pred. No. 2.7e-19;
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Pred. No. 2.7e-
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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                                                                                                                                                          Score
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                                                                                                            100.0
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cgn2_6/ptodata/1/paa/US06
cgn2_6/ptodata/1/paa/US07
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n2 6/ptodata/1/paa/US085_COMB.pep:*
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PCT-US02-04432-8
PCT-US02-04812-8
US-09-785-058-8
US-09-785-059-8
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US-10-079-075-8
PCT-US02-04432-7
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| | 75 | 7, 6 | 7,6 | 76 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 109 | 109 | 109 | 109 | 109 | 134 | 134 | 134 | 134 | 134 | 162 | 162 | 162 | 162 | 162 | 170 | 170 | 170 | 170 | 170 | 190 | 190 | 190 | 190 |
| | 34.7 | • | • | 35.2 | • | • | • | • | • | • | 40.7 | 40.7 | 40.7 | 40.7 | • | • | • | • | • | • | 62.0 | • | • | . • | 75.0 | • | • | • | • | 8 | ω. | œ | 8 | œ | 8 | 88.0 | 88.0 | 88.0 |
| | 28 | υı | ס ת | 183 | 31 | 31 | 31 | 31 | 31 | 24 | 24 | 24 | . 24 | 24 | 24 | 24 | 24 | 24 | 24 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 48 | 48 | 48 | 48 | 48 | 42 | 42 | 42 | 42 |
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| AI.TCUMENTS | PCT-US02-04812-1 | CT-IISO2-04432-1 | -10-219-999-6023 | 10-219-999- | -10-079-075-2 | -09-785-059- | -09-785-058- | -US02-04812- | -US02-04432- | -10-079-075-1 | -09-785-059-1 | -09-785-058- | -US02-04812-1 | -US02-04432-1 | -10-079-075- | -09-78 | -09-785-058- | -US02-04812- | -US02-04432-5 | -10-079-075- | -09-785-059- | -09-785-058- | -04812- | -US02-04432- | 79-075- | -09-785-059- | -09-785-0 | -US02-04812- | -US02-04432-6 | -10-079-075-1 | -09-785-059-1 | -09-785-058- | CT-US02-04812-1 | -US02-04432-1 | -10-079-075- | -09-785-059 | -09-785-058- | |
| | Sequence 1, Appli | | | | Sequence 2, Appli | equence 2, Appl | 2 | Ü | equence 2, | Sequence 10, Appl | 10 | \vdash | ,0, | equence 10, | ú | u | Sequence 5 | ģ | equence 5 | equence 1 | ы | ce 1 | equence 11 | 11 | 6, Appl | 6, App | Sequence 6 | equence 6, | quence 6, Appli | e L | equence 1 | equence 1 | 12 | equence 12, Appl | equence 7 | e 7, Appl | equence 7, Ap | Sequence 7, Appli |

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GENERAL INFORMATION:

Montelaro

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; OTHER INFORMATION: Artificial peptide derived from HIV-1
US-09-785-058-6
                                                                                                                                                                                                                                                                                     US-10-079-075-11
                                                                                                                                                                                                                                                                                                         RESULT 14
                             APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEO ID NOS: 12
SOFTWARE: FastSEO for Windows Version 3.0
SEQ ID, NO 11
LENGTH: 36
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Best Local &
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                                                                                                                                                                                                                             Sequence 11, Application US/10079075 Publication No. US20020188102A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A35577 / 072396.0217
CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                         APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzne
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TYPE: PRT
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ORGANISM: Artifical sequence
                     TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ENGTH: 36
RGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
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36; Conserv
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Pred. No. 2e-10;
0; Mismatches
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Pred. No.
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; FEATURE: ; OTHER INFORMATION: Artificial peptide derived from HIV-1 US-10-079-075-11
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Search completed: June Job time: 26.5319 secs
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US-09-785-058-11
                                                                                                                                                                                       OTHER INFORMATION: Artificial peptide derived from HIV-1
US-09-785-058-11
                                                                                                                                                                                                                               SOPTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 11
LENGTH: 36
TYPE: PRT
ORGANISM: Artifical sequence
                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 11, Applica Publication No. US20 GENERAL INFORMATION:
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Best Local Similarity 88.9
Matches 32; Conservative
                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A 34001 / 072396.0222
                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                  FEATURE:
                                                                              13 VRRVVRRVVRRVVRRVVRRVVRRVVRVVRVVRRVVRR 48
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Pred. No. 2e-10;
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Pred. No. 2e-10;
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; OTHER INFORMATION: artificial peptides derived from HIV-1 US-09-785-058-12
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; Sequence 12, Application US/09785058
; Publication No. US20030036627A1
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US-09-785-059-12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FABLSEQ for Windows Version 3.0
SEQ ID NO 12
                                                                                               NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
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Publication No. US20020188102A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
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Best Local :
                                                                                                                                                                                   APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VILUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A 34001 / 072396.0222
                                                                                                                                                  CURRENT APPLICATION NUMBER: US/09/785,058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
ORGANISM: Artifical
                                                ORGANISM: Artifical sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE; OTHER INFORMATION: artificial peptides derived from HIV-1
                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Artificial Sequence
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                                                                                 LENGTH: 48
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Pred. No. 1.2e-14;
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Pred. No. 1.2e-14;
0; Mismatches 4.
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; ORGANISM: Artifical sequence
; FEATURE:
; OTHER INFORMATION: Artificial peptide derived from HIV-1
US-09-785-059-6
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US-09-785-059-6
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                                                                                                                                ; OTHER INFORMATION: Artificial peptide derived from HIV-1
US-10-079-075-6
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 6
LENGTH: 36
                                                                            Query Match
Best Local &
                                                                                                                                                                                                              SEQ ID NO 6
LENGTH: 36
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Best Local Similarity
                                                                Matches
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
                                                                                                                                                                                                                                                                                                                                               APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
                                                                                                                                                                                                                                                                               CURRENT FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                       TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                 FEATURE:
                              13 VRRVVRRVVRRVVRRVVRRVVRRVVRRVVRR 48
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90.9%;
                                                              75.0%; Score 162; DB 9; 100.0%; Pred. No. 8.1e-14; ive 0; Mismatches 0;
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; Pred. No. 8.1e-14;
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Pred. No. 1.2e-14;
0; Mismatches 4
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RESULT 12 US-09-785-058-6

Sequence 6, Application US/09785058 Publication No. US20030036627A1

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                                                                       ; OTHER INFORMATION: Artificial peptide derived from HIV-1
US-09-785-059-7
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 Query Match
Best Local Similarity 100
Matches 42; Conservative
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Best Local
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                                                                                                                                                                            SEQ ID NO 7
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
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NUMBER OF SEQ ID NOS: 12
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396,0222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne
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                                                                                                            TYPE: PRT
ORGANISM: Artifical sequence
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OTHER INFORMATION: Artificial peptide derived from HIV-1
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88.0%; Score 190; DB 9; 1
100.0%; Pred. No. 3.8e-17;
live 0; Mismatches 0;
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Pred. No. 3.1e-20;
Vienatches 0;
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APPLICANT: NUMBLE C. MONTELBARO
FILE REFERENCE: A 34001 / 072396.0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows ''
SEQ ID NO 7
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US-09-785-058-7
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 7
                                             Sequence 12, Application US/09785059 Patent No. US20020169279A1 GENERAL INFORMATION:
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Best Local Similarity
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Best Local (
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APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
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TYPE: PRT
ORGANISM: Artifical sequence
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100.0%; Pr
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Pred. No. 3.8e-17
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Maximum DB
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Maximum Match 100%
Listing first 45 8
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                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                        Score
190
190
190
170
170
170
162
162
162
134
134
134
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seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                    Match Length
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Published_Applications_AA: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB_pep:*
/cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
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/cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cgn2_6/ptodata/1/pubpaa/USO8
cgn2_6/ptodata/1/pubpaa/PCT_
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ptodata/1/pubpaa/US08_NEW_PUB.pep:*
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                          US-09-785-058-7

US-09-785-059-12

US-10-079-075-12

US-09-785-059-6

US-09-785-059-6

US-09-785-059-6

US-09-785-059-1

US-09-785-058-1

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US-10-079-075-8
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| 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 |
|-------------------|-------------------|--------------------|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-------------------|-------------------|-------------------|-----------------|-------------------|-----------------|-----------------|-------------------|-----------------|------------------|-------------------|
| 52 | 52 | 52.5 | 53 | 54 | 54 | 54 | 56 | 57 | 57.5 | 57.5 | 57.5 | 57.5 | 58 | 60 | 66 | 66 | 66 | 75 | 75 | 75 | 88 | 88 | 88 | 88 | 88 |
| 24.1 | 24.1 | 24.3 | 24.5 | 25.0 | 25.0 | 25.0 | 25.9 | | 26.6 | 9 | 26.6 | 26.6 | 26.9 | 27.8 | 30.6 | 30.6 | 30.6 | | 34.7 | 34.7 | 40.7 | 40.7 | 40.7 | 40.7 | 40.7 |
| 344 | 29 | 2472 | 297 | 12 | 12 | 12 | 96 | 125 | 649 | 482 | 74 | 71 | 96 | 105 | 31 | 31 | 31 | 28 | 28 | 28 | 31 | 31 | 31 | 24 | 24 |
| 9 | 9 | 10 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 12 | 12 | 12 | 9 | 9 | φ | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| US-10-040-349B-1 | US-10-060-102-8 | US-09-815-242-5064 | US-09-738-626-6303 | US-09-785-058-4 | US-10-079-075-4 | US-09-785-059-4 | US-10-093-892-9 | US-10-114-893-313 | US-10-078-770-192 | US-10-078-929-180 | US-10-078-929-176 | US-10-078-929-174 | US-10-093-892-7 | US-10-093-892-5 | US-09-785-058-3 | US-10-079-075-3 | US-09-785-059-3 | US-09-785-058-1 | US-10-079-075-1 | US-09-785-059-1 | US-09-785-058-2 | US-10-079-075-2 | US-09-785-059-2 | US-09-785-058-10 | US-10-079-075-10 |
| Sequence 1, Appli | Sequence 8, Appli | Sequence 5064, Ap | Sequence 6303, Ap | Sequence 4, Appli | Sequence 4, Appli | Sequence 4, Appli | Sequence 9, Appli | Sequence 313, App | Sequence 192, App | 180, | Sequence 176, App | Sequence 174, App | Sequence 7, Appli | σ | Sequence 3, Appli | Sequence 3, Appli | Sequence 3, Appli | 1, | Sequence 1, Appli | ۲, | ,2 | Sequence 2, Appli | 'n | 10, | Sequence 10, Appl |

ALIGNMENTS

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; ORGANISM: Artifical sequence ; PEATURE: OTHER INFORMATION: Artificial peptide derived from HIV-1 US-09-785-059-8
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                                                                                                                                                                                                           US-10-079-075-8
                                                                                                                                                                                                                              RESULT 2
                                                                                                                                         Sequence 8, Application US/10079075
Publication No. USZ0020188102A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 8
LENGTH: 48
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION
APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VITUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT FAPLICATION NUMBER: US/10/079,075
CURRENT FILLING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
                                                                                                                                                                                                                                                                                                                                                                            48;
                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                             RVVRVVRRVVRRVVRRVVRRVVRRVVRRVVRRVVRRVVRRVVRRVVRR
                                                                                                                                                                                                                                                                                                                                                                          100.0%; ilarity 100.0%; Conservative
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                                                                                                                                                                                                                                                                                                                                                                        Score 216; DB y;
Pred. No. 3.1e-20;
                                                                                                                                                                                                                                                                                                                                                                                                                  Length 48;
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                                                                                                                                                                                                                                                                                                                                                                            0;
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Query Match
Best Local Similarity
Matches 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                            AAR77042-R77081 are synthetic, amphipathic, lytic peptide analogues of melittin, cecropin, magainin and defensin peptides. The peptides are between 23 and 39 residues long, are amphipathic, carry an overall positive charge and have anti-neoplastic activity. The peptides are specifically useful for the lysis of cancer cells. Normal mammalian cells are resistant to lysis due to their highly organised cytoskeletton, cancerous cells however posses an inferior and structurally compromised cytoskeleton which when acted upon by lytic peptides will cause cell lysis. This allows the lytic peptides to be used for in vivo treatment of cancers. The peptides are esp. useful for the treatment of female mammalian cancers e.g. breast, ovarian, uterine and cervical cancers. The peptides can however be used to treat most forms of cancer, cystic fibrosis, pneumonia, bronchitis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Method of combatting mammalian neoplasias and other disease states - by delivering non-naturally occurring, non-onco:cytologically proliferative lytic peptide
                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                      and bronchopulmonary viral and microbial infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 7; Page 47; 63pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Jaynes JM, Julian GR;
                                 7 RRVVRRVVRRVVRRVVRRVVRRVVRRVVRRVVR 40 :: |::| :| :| :| :| :| :
3 KKFVKKVAKVAKKVAKKVAKKVAKKVAKVAK 36
                                                                                                                                                                                                                                                                                       37 AA;
                                                                                                                                           Conservative
                                                                                                                                                                     27.8%;
                                                                                                                                           15;
                                                                                                                                    Score 60; DB 16; Length 37; Pred. No. 0.55; Mismatches 10; Indels
                                                                                                                                        0;
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Search completed: June 9, 2003, 11:55:33 Job time: 51.7447 secs

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ABP28565

ID ABP285

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AAR84150
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                                                                                            RESULT 14
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                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New Streptococcus protein for the treatment or prevention of infection or disease caused by Streptococcus bacteria, such as meningitis, and for detecting a compound that binds to the protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Streptococcus; GAS; GBS; group B streptococcus; Streptococcus agalactiae; group A streptococcus; Streptococcus pyogenes; antibacterial; antiinflammatory; infection; vaccine; meningitis; gene therapy.
                                   AAR84150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2002-352536/38.
N-PSDB; ABN69196.
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24-NOV-2000; 2000GB-0028727.
07-MAR-2001; 2001GB-0005640.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Streptococcus proteins.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; Page 3796; 4525pp; English.
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Tettelin H;
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                                                                                                                                                                                                                                                                                                           Similarity
16; Conserv
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INST GENOMIC RES.
                               standard; Peptide; 37
                                                                                                                                                                                  614 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Masignani V,
                                                                                                                                                                                                                                                                                                                                     28.0%;
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Pred. No. 7.4;
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                                                                                                                                                                                                                                                                                                           16;
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AAR77064
ID AAR
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Best Local S
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                                       08-APR-1994;
                                                                                                                                                                                                                                                           Anti-cancer; lysis; amphipathic; neoplasia; tumour; cystic fibrosis; bronchopulmonary; viral; virus; analogue; magainin; cecropin;
                                                                                                                                                                                                                                                                                                                          Synthetic anti-neoplastic lytic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Use of amphipathic peptide(s) - for enhancing fibroblast keratinocyte proliferation to promote wound healing in a
                                                                             06-APR-1995;
                                                                                                                                                               WO9527497-A1
                                                                                                                                                                                                    Synthetic
                                                                                                                                                                                                                                          melittin; defensin.
                                                                                                                                                                                                                                                                                                                                                                 20-MAY-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                               AAR77064 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sepsis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 7; Page 49; 64pp; English.
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(DEME-) DEMETER BIOTECHNOLOGIES LTD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             amphipathic peptide; enhance; fibroblast; keratinocyte; proliferation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Peptide enhancer of fibroblast and keratinocyte proliferation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAR84150;
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9; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        wound infection.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                37 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                       94US-0225476
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                                                                               95WO-US04335
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 60; DB:
Pred. No. 0.55
15; Mismatches
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RESULT 11
AAY56162
ID AAY56
RESULT 12
AAU52068,
ID AAU52
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AC AAU52
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Matches 12
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Best Local
                                                                                                                                                                                                                                                                            The present invention describes transgenic plants (A) comprising a heterologous gene which encodes a protein comprising an amphiphilic alpha-helix or a beta-pleated sheet, that produces more protein per tissue weight of root, tuber, seed, leaf, stem, edible portion, flower or whole plant than a normal plant. The preferred protein is an artificial storage protein designated ASPI which has been designed as a nutritional protein for humans. Products and methods from the present nutritional protein for humans.
                                                                                                                                                                                                                          invention can be used for producing transgenic plants with higher levels of protein content (e.g. 2 to 5-fold increase) and higher levels of essential amino acids. The present sequence represents a specifically claimed FDNP1 tetrameric protein from the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                             Transgenic plants containing genes encoding proteins comprising amphiphilic alpha helices or beta-pleated sheets to increase pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic.
  AAU5206@;
                          AAU52068 standard; Protein; 123
                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                        Claim 9; Page 95-96; 111pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                  production in plant tissues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2000-023363/02.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27-APR-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          09-FEB-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (DEME-) DEMEGEN INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tetrameric
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       human; artificial storage protein; ASP1; nutrition; crop; ial amino acid; protein content; expression.
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12; Conserv
                                                                                                                                              l Similarity
12; Conser
                                                                                                                RVIRVVQGACRAIRHIPRRIRQGLRRIL 28
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                                                                                             RVLHILEEFVRKFEETMRKGPGRMFEELVRTIEELMKKWEEVFKRVLHILEEFVRK 77
                                                                                                                                                                                                    172 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                               Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99WO-US09067.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               amino acid sequence
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                                                                                                                                                          28.7%; Score 62; DB:
21.4%; Pred. No. 1.4;
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Pred. No. 0.24;
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                                                                                                                                              Mismatches
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                                                                                                                                                                        21; Length 172
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CC Note: The sequence data for this patent did not form part of the printed confictation, but was obtained in electronic format directly from WIPO
                                                                                                                                Query Match
Best Local S
Matches 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Propionibacterium acnes polypeptides and nucleic acids useful for vaccinating against and diagnosing infections, especially useful treating acne vulgaris -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21-APR-2000; 2000US-199047P
02-JUN-2000; 2000US-208841P
07-JUL-2000; 2000US-216747P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis; uveitis; endophthalmitis; bone; joint; central nervous system; ELISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay; dermatological; osteopathic; neuroprotectant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic polypeptides. The proteins and their associated DNA sequences are used in
                                                                                                                                                                                                     Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 1; SEQ ID No 13263; 1069pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (CORI-) CORIXA CORP.
                                                                                                                                                                                                                                    ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001-616774/71.
)B; AAS59553.
81
                              43 -RRVVRR 48
                                                                21
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                                                                                                                                                   Similarity
                                                                 RFRRLHRRIVRHIAPQVPPRVGVRDRAHRRLTAANRRVPQRGRPPHRLVRPPRQVVVGLL
                                                                                                RVVRVVRRVVRRVR----
                                                                                                                                                                                                    123 AA;
                                                                                                                                  Conservative
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                                                                                                                                                  28.0%;
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, Jen S, Carter I
                                                                                                                                  Score 60.5; D
Pred. No. 1.5;
9; Mismatches
                                                                                                                                  9;
                                                                                                  RVVRRVVRVVRRVVRVR---RVVRRVVRVV----
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                                                                                                                                   16;
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                                                                                                                                   Indels
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RESULT 13

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RESULT 9
AAW47769
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Best Local
                                                                 The invention relates to new antimicrobial peptides which correspond to amino acid sequences in the transmembrane proteins of lentiviruses, in particular HIV and SIV. These peptides comprise arginine rich sequences which, when modelled for secondary structure, display high amphipathicity and hydrophobic moment. Also disclosed are structural and functional analogues and homologues of these peptides which also display antimicrobial activity. The peptides are highly inhibitory to microorganisms (bacteria, fungi, viruses and protozoa) but significantly less toxic to red blood cells and other normal mammalian cells. Activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present invention is concerned with the sequence of the genome of t SEN virus (SENV), and the proteins encoded by it. SENV is thought to be the cause of hepatopathies which are not linked to the presence of the hepatitis A, B and E virus man. The genome and proteins of this virus can be used in gene therapy and vaccination against the virus, which also causes disorders of the gastrointestinal tract, including which also cause and lupus erythematosus, inflammatory diseases, and
                                                                                                                                                                                                                                                                                                                                                                        26-JAN-1996;
24-JAN-1997;
                              Serratia marcescens.
                                          Pseudomonas aeruginosa,
                                                                                                                                                                                                                       Disclosure; Column 19; 59pp;
                                                                                                                                                                                                                                                    Retroviral TM peptides - useful as antibacterial agents
                                                                                                                                                                                                                                                                                   WPI; 1998-158352/14.
                                                                                                                                                                                                                                                                                                                                             (UYPI-) UNIV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Antimicrobial;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26-MAY-1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             proliferative disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 1; Page 356-358; 392pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          digeases
                                          demonstrated against Gram positive and negative bacteria including eudomonas aeruginosa, Staphylococcus aureus, Enterococcus faecalis a
 present sequence new peptides. It
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   microbial; transmembrane protein; TM; lentivirus lytic peptide; amphipathic; antibacterial; antifungal; antiviral; antiprotozoal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         immunodeficiency virus
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                                                                                                                                                                                                                                                                                                                                             PITTSBURGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         proliferative disorders such
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              peptide LLP1 analogue
                                                                                                                                                                                                                                                                                                                                                                       96US-0010634.
97US-0786748.
                                                                                                                                                                                                                                                                                                                                                                                                                   97US-0786748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29.2%;
                18
               one of 169 disclosed specific examples
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             such as cancer.
an analogue of the peptide
                                                                                                                                                                                                                                                                                                              RC,
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Pred. No. 4.4;
2; Mismatches
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                                                                                                                                                                                                                         English.
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 designated LLP1
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RESULT 10
AAY32703
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                                       Gene therapy. They can also be used in preventing infections through the sterilisation of wounds prior to suture and to sterilise surgical instruments. The unique structure of these antimicrobial peptides imparts high potency while selectivity is maintained, they are moderately haemolytic but only lyse red blood cells at high concentrations unlike melittin, a peptide extracted from bee venom, which is highly active against bacteria and lyses red blood cells showing little selectivity. The peptides target a membrane structure which makes it more difficult for a microorganism to develop a mechanism of resistance against this type of antibiotic. Their small size makes them relatively simple to prepare by standard synthetic peptide chemistry.
                                                                                                                                                                                                                                                                                                                                           microorganisms such as bacteria, fungi, protozoa and DNA and RNA viruses and can be used in tissue culture to inhibit unwanted microbial growth, particularly for the production of recombinant proteins or vectors for the production of the producti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This sequence represents an antimicrobial peptide of the invention, is an analogue of the peptide LLP1 (see AAY32549). The peptides can used for treating infections caused by Staphylococcus aureus,
                                                                                                                                                                                                                                                                                                                                                                                                 a mammalian host. They can be used to inhibit growth microorganisms such as bacteria, fungi, protozoa and
                                                                                                                                                                                                                                                                                                                                                                                                                                                          methicillin resistant S. aureus, Pseudomonas aeruginosa, Enterococcus faecalis, S. marcescens, Escherichia coli, fungi, protozoa and viruses
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-JAN-1996;
24-JAN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (see AAW47614) which of HIV strain HXB2R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Column 21; 62pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Antimicrobial peptides useful for treating microbial infections
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mietzner TA,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sterilisation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Antimicrobial peptide; LLP1; SLP-1; LLP2; SLP2A; SLP2B; ELP; infection; growth inhibitor; microorganism; virus; gene therapy; vector production;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-SEP-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Antimicrobial
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAY32703;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (UYPI-) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
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RVIRVVQGACRAIRHIPRRIRQGLRRIL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Montelaro RC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         96US-0010634.
97US-0786748.
97US-0932682.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              peptide LLP1 analogue
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       97US-0932682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                peptide;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              English.
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A
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                                                                                                                                                                                                                                                                                                                                                                                                                                            of diverse
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Sequence

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RESULT 7
AAM24328
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 spectrum of antimicrobial and antifungal activity. They can be used to treat or prevent infection in humans and animals or applied to plants as sprays, creams , dust, etc. The DNA encoding these peptides can also be incorporated into susceptible plants via the use of a non-phytotoxic vehicle adapted for systemic administration. This process imparts resistance to plant pathogens esp. fungi (e.g. Fusarium graminareum, F.moliniforme, Aspergillus flavus, Alternaria longipes, Colletotrichum graminicola, Phytophthora megasperme, manningola, colletotrichum graminicola, Phytophthora megasperme, manningola, colletotrichum graminicola, Phytophthora megasperme,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New antimicrobial amphipathic polypeptide(s) and related nucleic acids - for clinical use or esp. to increase resistance of plants
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rao
                                                                                                                              tomato; monkey; dog; sea urchin; expressed sequence tag; ES diagnostics; forensic test; gene mapping; genetic disorder; biodiversity; gene therapy; nutrition.
                                                                                                       Cryptosporidium parvum
                                                                                                                                                                         Human;
                                                                                                                                                                                                   C parvum EST encoded protein SEQ ID NO: 1853.
                                                                                                                                                                                                                             12-OCT-2001
                                                                                                                                                                                                                                                                                 AAM24328 standard; Protein; 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sclerotinia sclerotonium). The pertransformed plants such as maize,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAR80727-R80748 are new amphipathic polypeptides.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 1; Page 17; 24pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  to fungal pathogens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07-JAN-1994;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       broad spectrum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Antimicrobial; antifungal; pathogen; plant; amphipathic;
25-JAN-3000; 2000US-0491404
                        25-JAN-2001; 2001WO-US02687
                                                      02-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (PION-) PIONEER HI-BRED INT INC
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                                                                                                                                                                       sheep; pig; cow; fruit fly; yeast; hamster;
                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sunflower,
                                                                                                                                                                                                                                                                                                                                                                                                                                                       31
                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                       A,
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                                                                                                                                                                                                                                                                                                                                                                                                                29.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tobacco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The peptides are
                                                                                                                                                                                                                                                                                                                                                                                                7;
                                                                                                                                                                                                                                                                                                                                                                                                    Score 64; DB 1
Pred. No. 0.15;
7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                aize, sorghum, wheat, or tomato.
                                                                                                                                                                                                                                                                                                                                                28
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         esp. useful
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                                                                                                                                                                       macaque;
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RESULT 8
AAB11535
ID AAB1
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Best Local S
Matches 27
                                                                                                        10-NOV-1998;
30-APR-1999;
14-MAY-1999;
                                              Primi D,
Bonelli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cow, pig, hamster, monkey, macaque, yeast, bacteria, fruit fly, sea urchin and tomato. These were derived from expressed sequence tags (I from the organism of interest. They can be used in diagnostics, forensics, gene mapping, identification of mutations, to assess biodiversity and for nutritional purposes. The present sequence is a protein of the invention.
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03-AUG-2000; 2000US-0631451.
15-SEP-2000; 2000US-0663870.
                                                                                                                                                                                                                                     SEN virus; SENV; gastrointestinal tract disorder; inflammatory disease; proliferative disorder; hepatopathy; hepatitis; viral infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
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N-PSDB; AAH98987.
                                                                                                                                                09-NOV-1999;
                                                                                                                                                                                                         Hepatitis virus
                                                                                                                                                                                                                                                                    SEN virus protein
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                                                                                                                                                                                                                                                                                                           AAB11535;
                                                                                                                                                                                                                                                                                                                              AAB11535 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           proteins from a variety
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                            WPI; 2000-376551/32.
                                                                                                                                                                                        WO200028039-A2
                                                                                                                                                                                                                             vaccination;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention provides the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Isolated polypeptide for treatment of diseases, diagnostics, raising
                                                                           (DIAS-) DIASORIN SRL.
                                                                                              16-JUL-1999;
                                                                                                                                                                    18-MAY-2000.
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Drmanac RA,
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                                              Fiordalisi
, Vaglini I
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                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                            gene
                                                                                                                                                                                                                                                                                       (first entry)
                                                                                              98IT-MI02437.
99IT-MI00923.
99EP-0830298.
99EP-0113932.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            research
                                                                                                                                                99WO-EP08566
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VA, Zhang
                                                                                                                                                                                                                                                                    fragment
                                                                                                                                                                                                                            therapy.
                                                                                                                                                                                                                                                                                                                               Protein;
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Ω
                                              Mantero
Olivero F
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J, W
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Pred.
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Werhman
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nan T;
                                               Dal
                                              Mattioli S,
al Corso A,
                                                                                                                                                                                                                                                                                                                                                                                                                                 0.61;
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                                              Sottini A;
Bonelli M;
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Nucleic acids representing the genome of the SEN virus (SENV) and encoded proteins, useful for treatment of hepatopathies, inflammatory

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RESULT 4
AAG65539
ID AAG6
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                                                                                                                                                           having 8-50 amino acids, a net charge of 4, a hydrophobic moment (microh) as a beta sheet which is 0.2 higher than its micro H as alpha helix, and having detectable membrane disrupting activity against a microbial pathogen, and substantially no membrane disrupting activity against mammalian cells. (I) is useful for inhibiting microbial activity. (I) has a detectable membrane disrupting activity against a pathogen, and is useful for inhibiting mon-microbial pathogenic activity also. (I) is also useful for inhibiting non-microbial pathogenic activity also. (I) is also useful for killing human sperm. The peptides are also provided in the form of an expression vector comprising a nucleic acid encoding the peptides. The peptides are useful for inhibiting the activity of bacteria, and other microbial pathogens such as algae, fungi or protozoa and for inhibiting non-microbial pathogens such as worms or arthropods, and as spermicides for humans as the sperm membrane is atypical of human cell membranes. (I) also has diagnostic uses e.g., in localizing an infection or detecting sepsis. The peptides may act as binding molecules and are useful to nurify a target from blood for malitarity account.
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Best Local :
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                                                                                                    and are useful to purify a target from blood, for qualitative or quantitative analysis of analytes in in vitro sample, and for in vivo imaging. Also, they are useful as molecular weight markers, as nutrier
                                                   source, as growth medium component for culturing microorganisms, as well as a food ingredient for human consumption. The peptides have a greater selectivity for bacterial versus mammalian lipids as compared to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Novel peptides having antimicrobial activity have positive charge to selectively disrupt microbial membranes, assume beta sheet structure membrane environment and are substantially amphipathic in beta sheet
                   sequences of antimicrobial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200160162-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        spermicide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Antimicrobial; microbial membrane disrupter; gene therapy; pathogen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Peptide sequence used in the course of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAG65539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAG65539 standard; peptide; 18
                                   alpha helical peptides. Sequences AAG65536-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention provides an antimicrobial compound (I) which is a peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 102; Page 84; 119pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2001-565322/63.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-FEB-2000; 2000US-0182495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15-FEB-2001; 2001WO-US04822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (UYOH-) UNIV OHIO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10 VRRVRRVVRRVVRVVRRVVRRVVRRVVR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   l Similarity
12; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 LRRLLRLLRRLLRLLRRLLRLLRRLLR 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      imaging;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ą,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        magainin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13;
                   peptides.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 69; DB 10
Pred. No. 0.035;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PGla.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                            as nutrient
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RESULT 5
                                                                               RESULT 6
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                                                                                                                                                               Query Match
Best Local S
Matches 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
         Synthetic antimicrobial/antifungal polypeptide.
                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                        The synthetic ampipathic alpha-helical lytic peptides given in AAR60057-71 were designed to provide antifungal or antimicrobial activity when expressed in monocot or dicot plants. They also be veterinary and medical applications.
                                                                                                                                                                                                                                                                                              Synthetic polypeptide(s) and the nucleic acid encoding them - exhibits amphipathic alpha-helices and provide cell-expressable antimicrobial activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                 AAR80735;
                                                                    AAR80735 standard; peptide; 31
                                                                                                                                                                                                                                                                            Disclosure; Page 19; 25pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Amphipathic peptide; alpha-helix; lytic peptide; antifungal; antimicrobial; fungus resistance; disease resistance;
                            28-FEB-1996 (first entry)
                                                                                                                                                                                                                                                                                                                                        WPI; 1994-249137/30.
                                                                                                                                                                                                                                                                                                                                                            Rao AG,
                                                                                                                                                                                                                                                                                                                                                                                                    13-JAN-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                       12-JAN-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      crop protection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Antimicrobial peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16-FEB-1995 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAR60065;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAR60065 standard; peptide; 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO9415961-A
                                                                                                                                                                                                                                                                                                                                                                                (PION-) PIONEER HI-BRED INT INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
                                                                                                                                   18 RRVVRVVRRVVRRVVRRVVRRVVRRV 45
                                                                                                                                                                12;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N
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8; Conserv
                                                                                                                                                                         Similarity
                                                                                                                       RRIYRAIRHIPRRIRGWLRRIGRRIERV 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RIIRRIIRIIRRIIRRI 18
                                                                                                                                                                                                      31 AA;
                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                    93US-0003884.
                                                                                                                                                                                                                                                                                                                                                                                                                        94WO-US00383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            31.0%;
                                                                                                                                                                        29.6%;
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                                                                                                                                                                        Score 64;
Pred. No.
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Pred. No. 0.039;
                                                                      A
                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                          0
                                                                                                                                                                                  DB 15;
                                                                                                                                                           9;
                                                                                                                                                                                 Length 31;
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                                                                                                                                                                Indels
                                                                                                                                                                                                                                      They also have
                                                                                                                                                               0,
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                                                                                                                                                               Gaps
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RESULT 2
AAW06684
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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present peptide corresponds to a generic formula for a cationic oligopeptide; the formula is (b-1-1-b)n, where b is a hydrophobic are acid, l is a hydropholic amino acid and n is at least 4. In this case where b is Leu, l is Arg and n = 10, the oligopeptide forms an alpha helix which forms a stable complex with a nucleic acid. The complex
                                                                                                                                                                                                                                                                                                                                                             Coagulation; anticoagulant; heparin; platelet aggregation; cell adhesion; positively charged cluster; arginine; polycationic; decrease; n-protamine; salmine protamine; protamine sulphate; salmon sperm.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Complex of nucleic acid and oligopeptide transfer vectors contg. them, useful for nucleic acid to cells in gene therapy.
                  Claim 31; Page 31;
                                                                        WPI; 1997-011697/01.
                                                                                                                                                         08-MAY-1996;
                                                                                                                                                                                                                                  Modified-site
                                                                                                                                                                                                                                                     Binding-site
                                                                                                                                                                                                                                                                                     Region
                                                                                                                                                                                                                                                                                                                                          Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                        Protamine-like peptide analogue [+18RGD]
                                                                                                                                                                                                                                                                                                                                                                                                                             05-AUG-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAW06684 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 6; Page 16; 20pp; French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1995-276981/37
                                          protamine
                                                                                                                                                                               14-NOV-1996.
                                                                                                                                                                                                  WO9635444-A1
                                                                                                                                                                                                                                                                                                           Modified-site
                                                                                                                 (UNMI ) UNIV MICHIGAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  suitable for transferring nucleic acid, esp. in gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18;
                                         reversing
ne but has
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                            'n,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                            Stanley JC,
                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
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                                                                                                                                     95US-0436703
                                                                                                                                                          96WO-US06567
                                                                                                                                                                                                                                                      /note=
                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                           'label=
                                                                                                                                                                                                                                                                                                 note= "acetylated"
                                                                                                                                                                                                                                            label=
                                        the anticoagulant effects of heparin - is be fewer positive charges for reduced toxicity
                  42pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     peptide; 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            35.4%;
                                                                                                                                                                                                                         "amidated"
                                                                                                                                                                                                                                                               repeat_region
"4 tandem repeats of (Arg)2(Ala)2(Arg)2Ala motif"
                                                                                                                                                                                                                                          cell_adhesion_motif
                                                                                            Wakefield
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 76.5; D
Pred. No. 0.00
18; Mismatches
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efficient
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          structure
transfer o
                                                   is based
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    u
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 this case,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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                                                   9
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Protamine sulphate

(also called n-protamine

or salmine protamine)

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levels

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RESULT 3
AAP91336
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cc reverse heparin anticoagulation. One of the major components of ce salmine protamine is a 32 amino acid peptide having a total cationic charge of [+21], with arginine accounting for 67% of the total sequence cc charge of [+21], with arginine accounting for 67% of the total sequence cc and for all of the positive charge. Peptides of 20-40 amino acids with total cationic charge less than [+21] and which are able, at least comparin anticoagulants are claimed. Specifically, the peptides are cc polycationic analogues of n-protamine where the positive charge on the camino acid sequence is reduced by selective replacement of positively cc amino acid sequence is reduced by selective replacement of positively cc charged arginine residues with an uncharged residue, so that total cationic charge is less than [+21]. The new peptides are used in vivo cc reverse the effects of heparin; they have the same anti-heparin cc activity as protamine but are less toxic (because of the reduced cc number of positive charges) and are relatively easy and inexpensive to prepare. The present sequence represents a specifically claimed cc protamine-like peptide with a charge of [+18]; this peptide also concludes an RGD fibronectin receptor ligand motif. Paptide [+18RCD] improved the reversal of anti-Factor Xa activity of the low molecular concepts and the partine anti-fee [+18RCD] and the partine anti-fee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
              Amino acid sequence of Shiva-4 as an exemplary lytic peptide for use as an antinicrobial peptide contemplated for use in plant trichophyte) transformants in the invention. It is a homologue of Shivas-2, -3 and -5 to -7. All of these Shiva peptides are also contemplated as having general utility in inducing lysis of cells in vitro. Shiva-4 may be too lytically active to be used in plants at high
                                                                                                                                                                                                                    Transformed plants contg. heterolgous gene - expressing agent, or polypeptide high in essential amino acids
                                                                                                                                                                                                                                                                                                                                     Jaynes JM,
                                                                                                                                                                                                                                                                                                                                                                                                                           02-NOV-1987;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       02-NOV-1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Shiva-4; lytic peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAP91336;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAP91336 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protamine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a polycationic peptide derived from salmon sperm and is used
                                                                                                                                                                                                                                                                                        WPI; 1989-165650/22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18-MAY-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO8904371-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        trichophyte;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19-MAR-1990
                                                                                                                                                                                                                                                                                                                                                                               (LOUU ) LOUISIANA STATE UNIV
                                                                                                                                                                          I;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7 RRVVRRVRRVVRRVVRRVVRRVVRRVVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RRAARRARRAARR----ARRAARRARRARRARR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Also, peptide (+18RGD) produced less decrease in platelet n-protamine.
                                                                                                                                                                          56pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            39 AA;
                                                                                                                                                                                                                                                                                                                                     Derrick
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ic peptide; antimicrobial peptide; disease-resistant Shiva-2; Shiva-3; Shiva-5; Shiva-6; Shiva-7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first
                                                                                                                                                                                                                                                                                                                                                                                                                           87US-0115941.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       88WO-US03908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of Shiva-4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        32.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 70;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
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Copyright (c) 1993 - 2003 Compugen Ltd.
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AAW47769
AAY32703
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| AAY32564 | 5 | AAY32590 | AAY32587 | AAY32592 | AAW47636 | AAW47633 | AAW47628 | AAW47657 | AAW47655 | AAW47652 | AAW47623 | AAR89993 | AAR92436 | AAR05095 | AAW25793 | AAY32563 | AAW47627 | AAW05116 | AAB11546 | ABB66985 | AAR05096 | AAW99084 | AAY04933 | AAW25792 | AAW39765 | AAR90748 | AAR92394 | AAR64792 | AAR74713 | AAR77064 | AAR84150 | 856 | 52 | AAY56162 |
| Antimicrobial pept | _ | _ | -ر | _ | _ | _ | ۲ | _ | _ | Antimicrobial pept | Antimicrobial pept | Synthetic lytic pe | Lytic peptide used | Synthetic HIV-1 tr | | Antimicrobial pept | | o | SEN virus protein | Drosophila melanog | PSD302.PEP HIV-1 g | Non-B, non-C, non- | um er | | lysine | Synthetic lytic pe | Lytic peptide used | Amphipathic peptid | Tryptic digestion | Synthetic anti-neo | er' | Streptococcus poly | 0 | FDNP1 tetrameric a |

ALIGNMENTS

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| Bazile D, Emile C, Helene C, Spenlehauer G; | (RHON) RHONE POULENC RORER SA. | 08-FEB-1994; 94FR-0001381. | 08-FEB-1994; 94FR-0001381. | 11-00G-1000. | 11-2005 | FR2715847-A1. | | pref. 10-50" | <pre>/note= "repeat unit; must have at least 4 repeats,</pre> | | ion | Key Location/Qualifiers | | Synthetic. | | ulatio | Alpha-helix; secondary structure; nucleic acid transfer; cationic; | | Alpha-helix-forming oligopeptide (LRRL)10. | | 18-MAR-1996 (first entry) | | AAR84926; | | AAR84926 standard; peptide; 40 AA. | RESULT 1 AAR84926 |

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Pfam; PF00989; PAS; 1.
Pfam; PF00512; Signal; 1.
SMART; SM00387; HATPASE C; 1.
SMART; SM00388; Hiska; 1.
SMART; SM00091; PAS; 1.
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01-DEC-2001
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TT virus.
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Chandler M.,
                                                                                                                                                                                 MEDLINE=21440417; PubMed=11556704; Muljono D.H., Nishizawa T., Tsuda F., "Molecular epidemiology of TT virus ('molecular epidemiology of TT virus ('novel TTV genotypes in Indonesia."; Arch. Virol. 146:1249-1266 (2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Siguier P., Thebault P., Whalen M., Wincker P., Levy M., Weissenbach J., Boucher C.A.; "Genome sequence of the plant pathogen Ralstonia solanacearum."; Nature 415:497-502(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; AL646072; CAD16515.1; -.
InterPro; IPR003594; ATPbind ATPage.
InterPro; IPR003661; His kinā.
InterPro; IPR004359; HIS KIN sig.
InterPro; IPR000014; PAS_domain.
                                                                                                                                        InterPro; IPR004219; TTV
Pfam; PF02956; TT_ORF1;
SEQUENCE 742 AA; 8811
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                                                                                                                                                                                                                                                                                                                                       Viruses; ssDNA viruses;
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Siguier P., Thebault P., Whalen
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PRELIMINARY;
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82 AA; 74548 MW;
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                                                     RRTTRYARR--RRVRRLRRRRRRRGWARRRYLRARRRVKRR
                                                                                                                                         88114 MW; A4E27AB09163DB5A CRC64;
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                                                                                                         29.6%;
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., Claudel-Renard C., Cunnac S., Demange N.,
oisan A., Robert C., Saurin W., Schiex T.,
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3; Mismatches
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PRT;
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Q9ZIY4;
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01-NOV-1999 (
01-NOV-1999 (
01-JUN-2001 (
RJ1 protein.
RJ1 OR LT1.
                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN=N40;
Feng S., Barthold S.;
Feng S., Barthold S.;
"L5 clone from Borrelia burgdorferi.";
Submitted (MAY-1997) to the EMBL/GenBar
EMBL; AF005057; AAD01236.1; -.
Hypothetical protein.
SEQUENCE 85 AA; 10295 MW; 4D1DA502;
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J. Virol. 0:0-0(1999).
EMBL; AB021506; BAA78318.1; -.
EMBL; AB021506; BAA78211.1; -.
SEQUENCE 115 AA; 13818 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hypothetical 10.3 kDa protein.
Borrelia burgdorferi (Lyme disease spirochete).
Bacteria; Spirochaetales; Spirochaetaceae; Borrelia.
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Sunagawa T., Sashihara J., Zou P., Kosuge H., Yamanishi K.;
"A comparison of the complete DNA sequences between human herpesvirus-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN-HST;
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85 AA; 10295 MW; 4D1DA5029E7DFF59 CRC64;
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llarity 53.2%;
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Best Local
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01-AUG-1998
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SEQUENCE FROM N.A.
Van Etten J.J.
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MEDLINE-96187795; PubMed=8614977;

LU Z., Li Y., Que Q., Kutish G.F.,

"Analysis of 94 kb of the chlorell;

positions 88 to 182.";

Virology 216:102-123(1996).
                                                                                                                                                                                                                                 Gurnon J.R., Graves M.V., Va
Submitted (DEC-2000) to the
EMBL; U42580; AAC96577.1; -.
                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. Graves M.V., Van Etten Submitted (DEC-1998) to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=20013326; PubMed=10544099;
Kaiser A., Vollmert M., Tholl D., Graves M.V.,
Lisec A.D., Nickerson K.W., Van Etten J.L.;
"Chlorella virus PBCV-1 encodes a functional ho
                 Backeriophage N15.
Viruses; dsDNA viruses,
Lambda-like viruses.
                                              GENE 11.
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Submitted (SEP-1997)
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MEDLINE=20478054; Pub
Sun L., Gurnon J.R.,
"Characterization of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
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NCBI_TaxID=40631;
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en J.L.;
ed (MAY-1997)
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                                                                (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                                                     Conservative
                                                                                                    PRELIMINARY;
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R., Adams B.J., Graves M.V., of a beta-1,3-glucanase enco
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he EMBL/GenBank/DDBJ databases.
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Pred. No. 2.1;
7; Mismatches
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                           stage;
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annotation
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a virus
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                          Caudovirales;
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PBCV-1 330-kb
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by chlorella
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                            Siphoviridae;
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RESULT
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Matches
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Q8XVM2;
01-MAR-2002
01-MAR-2002
01-JUN-2002
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01-OCT-2001
01-OCT-2001
01-MAR-2002
                                                                                                                                                                                                                                                                                         EMBL; AP003010; BAB53093.1; -. Hypothetical protein; Complete SEQUENCE 349 AA; 37473 MW;
                                                                                                                                                                                                                                                                                                                                                   Kaneko T., Nakamura Y., Sato S., Asamizu E., Kato T., Sasan Watanabe A., Ideeawa K., Ishikawa A., Kawashima K., Kimura Kishida Y., Kiyokawa C., Kohara M., Matsumoto M., Matsuno A Mochizuki Y., Nakayama S., Nakazaki N., Shimpo S., Sugimoto Takeuchi C., Yamada M., Tabata S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hendrix R.W., Ravin V.K.,
Smirnov I.K.;
Submitted (MAY-1998) to th
EMBL; AF064539; AAC19048.1
                                                                                                Probable transmembrane sensor protein (EC 2.7.3.-).
                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN=MAFF303099;
MEDLINE=21082930; PubMed=11214968;
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                                                                   Ralstonia solanacearum (Pa
Bacteria; Proteobacteria;
                                                                                       protein (EC 2.7.3.-).
PEHS OR RSC2808 OR RS00297
                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Phyllobacteriaceae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hypothetical
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                                                                                                                                                                                                                                                                                                                        DNA Res. 7:331-338(2000).
                                                                                                                                                                                                                                                                                                                                   "Complete genome structure Mesorhizobium loti.";
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18; Conservative
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(TrEMBLrel. 18, La
(TrEMBLrel. 20, La
d protein mll6891.
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or histidine kinase transcription regulator
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Pred. No. 7.6;
3; Mismatches
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B7E34ECECCC39304
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                                                                           solanacearum)
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7.6;
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SEQUENCE FROM N.A.
STRAIN=GMI1000;
MEDLINE=21681879; PubMed=11823852;
Salanoubat M., Genin S., Artiguena

Artiguenave

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Gouzy

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Mangenot

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Ralstonia

Ralstonia

group

CBI_TaxID=305;

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RESULT 7
Q99AR5
ID Q99AR5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Genome structure and evolution in the amoebo-
Naegleria gruberi.";
Submitted (MAR-1995) to the EMBL/GenBank/DDBJ
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Eukaryota; Heterolobosea;
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EMBL; AF261667; AAG00439.1; -.
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Qiao X., Qiao J., Onodera S., Mindich L.;
"Characterization of phi13, a bacteriophage related to phi6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hoogstraten D.; "Isolation of additional bacteriophages with genomes of segmented double-stranded RNA.";
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NCBI_TaxID=134554;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=5762;
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Mindich L., Qiao X.,
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Viruses; dsRNA viruses; Cystoviridae; Cystovirus
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K., Qiao J., Onodera
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                                     A209R protein.
A209R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Heterogeneous distribution of TT virus multiple tissues from infected humans."; Virology 288:358-368(2001).
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"Novel variants related to TT virus wide Submitted (JAN-2001) to the EMBL/GenBank/EMBL; AF345521; AAK11696.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=21488921; PubMed=11601907;
Okamoto H., Nishizawa T., Takahash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Viruses; ssDNA viruses; unclassified NCBI_TaxID=68887;
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                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; AB060595; BAB69912.1; -
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Pfam; PF02956; TT_ORF1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Luo K.-X., He H.-T.,
Liang W.-F., Zhang L.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yoshikawa A.;
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NCE 759
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                                                                                                                                                                                                                                                                          4 RVVRRVVRR-VRRVVRRVVRRVVRRVVRRVVRRVVRVVRR--VVRR
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                                                                                                                                                                                                                                                                                                                              Similarity
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Phycodnaviridae; Chlorovirus.
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Q9SHX2;
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01-MAY-2000 (TrEMBLrel. 1:
01-JUN-2002 (TrEMBLrel. 2:
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GOTTLIED P., Wei H., Toporovsky I.;

"Nucleotide sequence of the middle dsRNA segment of Phi-12.";

Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.

EMBL; AY039807; AAK74123.1; -.

SEQUENCE 242 AA; 25478 MW; 8F6676077899AFE0 CRC64;
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SEQUENCE FROM N.A.
STRAIN=CV. COLUMBIA;
MEDLINE=20083487; PubMed=1
Lin X., Kaul S., Rounsley
                                                                                                                                                                                                                           Arabidopsis thaliana (Mouse-ear cress).

Bukaryota; Viriddiplantea; Streptophyta; Embryophyta;

Spermatophyta; Magnoliophyta; eudicotyledons; core e

geurosids II; Brassicales; Brassicaceae; Arabidopsis.
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Viruses; dsRNA viruses;
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Pyne C. Babiuk L.A., Tikoo S.K.;
Pyne C. Babiuk L.A., Tikoo S.K.;
Pyne C. Babiuk L.A., Tikoo S.K.;
Pyne C. Babiuk L.A., Tikoo S.K.;
EMBL; AF030154; AAD09724.1; -
PfmH; AF030154; AAD09724.1; -
Pfam; PF03228; Adeno VII; -
PF0428; APP0428; APP042
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   PubMed=10617197;
Rounsley S.D., Sh
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                                                                                                                                   SEQUENCE FROM N.A.

STRAIN=AV19 / DSM 6324 / JCM 9639;

MEDLINE=21927647; PubMed=11930014;

Slesarev A.I., Mezhevaya K.V., Makarova K.S., Polushin N.N.,

Shcherbinina O.V., Shakhova V.V., Belova G.I., Aravind L.,

Shcherbinina O.V., Shakhova V.V., Belova G.I., Aravind L.,

Natale D.A., Rogozin I.B., Tatusov R.L., Wolf Y.I., Stetter K.O.,

Malykh A.G., Koonin E.V., Kozyavkin S.A.;

"The complete genome of hyperthermophile Methanopyrus kandleri AV19

and monophyly of archaeal methanogens.";
                                                                                                                                                                                                                                                                                                                                                               QSTXS5;
                                                                                       Proc. Natl. Acad. Sci. U.S.A
EMBL; AB010352; AAM01800.1;
Complete proteome.
SEQUENCE 428 AA; 48744 MW
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Copyright (c) 1993 - 2003 Compugen Ltd.
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Q25562 naegleria g
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| 869 | 855 | 842 | 738 | 389 | 312 | 138 | 94 | 723 | 619 | 217 | 166 | 100 | 100 | 100 | 263 | 761 | 513 | 331 | 862 | 755 | 650 | 105 | 105 | 651 | 635 | 331 | 321 | 211 |
| 15 | 15 | 15 | 12 | 17 | v | 16 | 12 | 12 | ហ | ហ | ω | ഗ | տ | ഗ | 10 | 12 | 16 | 17 | 15 | 12 | 10 | u | ហ | 10 | N | 12 | 12 | 12 |
| Q8UL69 | Q8UL67 | Q9QM83 | Q8V7H2 | Q8TXI1 | Q21320 | Q9RD30 | Q8V7D3 | Q9DUC4 | Q95S18 | Q9VGX3 | Q05385 | 000913 | 000912 | Q9GRP6 | Q9LN00 | 88TW6Ö | Q9R2U5 | Q8TXA5 | Q90CG7 | Q91D00 | Q39721 | Q9TVI8 | Q25305 | Q39720 | 030348 | Q69581 | Q69545 | Q69587 |
| ø | | | | Q8txil methanopyru | O | Q9rd30 streptomyce | | Q9duc4 tt virus. o | Q95s18 drosophila | | | O00913 leishmania | O00912 leishmania | _ | Q9ln00 arabidopsis | Q9wt88 tt virus. o | | Q8txa5 methanopyru | Q90cg7 human immun | 0 | Q39721 euglena gra | | | 720 | 0348 ralston | 581 human | human he | Q69587 human herpe |

ALIGNMENTS

| R R R R R R R R R R R R R R R R R R R | 8 | RES O711 AC DT DT DE OS OC |
|--|--|---|
| SEQUENCE FROM N.A. STRAIN-WBR-1; MEDLINE-98451815; PubMed=9778793; MEDLINE-98451815; PubMed=9778793; Lee J.B., Baxi M.K., Idamakanti N., Reddy P.S., Zakhartchouk A.N., Pyme C., Babiuk L.A., Tikoo S.K.; "Genetic organization and DNA sequence of early region 4 of bovine adenovirus type 3."; Virus Genes 17:99-100(1998). [4] SEQUENCE FROM N.A. | [1] SEQUENCE FROM N.A. STRAIN=WBR-1; MEDLINE=98105785; PubMed=9445040; MEDLINE=98105785; PubMed=9445040; Reddy P.S., Idamakanti N., Zakhartchouk A.N., Baxi M.K., Lee J.B., Pyne C., Babiuk L.A., Tikoo S.K.; "Nucleotide sequence, genome organization, and transcription map of bovine adenovirus type 3."; J. Virol. 72:1394-1402 (1998). [2] SEQUENCE FROM N.A. STRAIN=WBR-1; STRAIN=WBR-1; MEDLINE=98318755; PubMed=9654686; Baxi M.K., Reddy P.S., Zakhartchouk A.N., Idamakanti N., Pyne C., Babiuk L.A., Tikoo S.K.; "Characterization of bovine adenovirus type 3 early region 2B."; Virus Genes 16:313-316 (1998). | RESULT 1 071097 PRELIMINARY; PRT; 171 AA. ID 071097; PRELIMINARY; PRT; 171 AA. AC 071097; PRELIMINARY; PRT; 171 AA. AC 071097 01-AUG-1998 (TYEMBLIFEL 07, Created) DT 01-AUG-1998 (TYEMBLIFEL 07, Last sequence update) DT 01-UN-2002 (TYEMBLIFEL 21, Last annotation update) DE PVII. OS Bovine adenovirus type 3 (Mastadenovirus bos3). OS Wiruses; dsDNA viruses, no RNA stage; Adenoviridae; Mastadenovirus. OX NCBI_TaxID=10510; |

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L2MU_ADEB2
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Best Local :
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or send a
 Core protein;
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                                                                              or send a
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InterPro;
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                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                   Rusvai M., Harrach B., Banrevi A., Evans P., Benko M.;
Submitted (OCT-1996) to the EMEL/GenBank/DBU databases.
-I- FUNCTION: THE ROLE OF THE PRECURSOR MIGHT BE TO CONI-
VIRAL PROCHROMATIN FOR ENCAPSIDATION BY VIRTUE OF THE
BASIC DOMAINS (BY SIMILARITY).
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                     EMBD; U44123; AAB16758.1; -.
                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                Viruses; dsDNA viruses,
                                                                                                                                                                                                                                                                                                                                             Bovine adenovirus type 2 (Mastadenovirus bos2)
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16-OCT-2001
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01-NOV-1997
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   D. Natl. Acad. Sci. U.S.A. 99:443-448(2002).
FUNCTION: The ruvA-ruvB complex in the presence of ATP renatures cruciform structure in supercoiled DNA with palindromic sequence,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          indicating that it may promote strand exchange reactions in homologous recombination. RavAB is an helicase that mediates Holliday junction migration by localized denaturation and reanneling (By similarity)
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                                                                            s requires a license agreement (S an email to license@isb-sib.ch).
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IPR003959; AAA_ATPase_centr
IPR004605; RuvB.
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(Rel. 35, Last sequence update)
(Rel. 40, Last annotation update)
core protein precursor (pMu) (Prot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOS response; ATP-binding; DNA recombination;
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Late protein.
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LATE L2 MU CO
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Pred. No. 5.4;
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F97710688F919FBC CRC64;
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Search completed: June Job time: 10.7021 secs
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01-NOV-1997
15-JUN-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced between the Swiss Institute of Bioinformatics and the European Bioinformatics Institute. There are use by non-profit institutions as long as its modified and this statement is not removed. Usage
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PROSITE; PS00398; RECOMBINASES 2; 1.
Hypothetical protein; DNA recombination;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Freiberg C.A., Perret X.;
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MEDLINE=97305956; PubMed=9163424;
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ilarity 36.4%;
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1-invertase Y4CG.
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Best Local :
                                                                                                                                                                                                                                                                                                                                                           SEQUENCE.
SPECIES=C.pallasii;
SPECIES=73223106; Pu
MEDLINE=73223106; Pu
Ando T.;
                    PIR;
                                                            P02335;
21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation updat
Protamine YII (Clupeine YII)
Clupea pallasi (Pacific herring), and
Clupea harengus (Atlantic herring)
Eukaryota; Metazoa, Chordata, Craniata, Ver
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collable between the Swiss Institute of Bioinformatics and the EMBL outset the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for commodified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 halodurans and genomic sequence comparison with Nucleic Acids Res. 28:4317-4331(2000).

-I- CATALYTIC ACTIVITY: ATP + uridine = ADP + UM
-I- CATALYTIC ACTIVITY: ATP + cytidine = ADP + C
-I- PATHWAY: Pyrimidine salvage pathway.
-I- SUBCELLULAR LOCATION: Cytoplasmic (By simila
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLUPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRINTS; PR00478; PHRIBLKINASE.
PRINTS; PR00988; URIDINKINASE.
TIGRFAMS; TIGR00235; udk; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR001324; PRK.
InterPro; IPR000764; Uridine_kin.
Pfam; PF00485; PRK; 1.
                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                      "Studies on protamines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Actinopterygii; Neopterygii;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
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NP_BIND 12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Complete genome halodurans and ge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Horikoshi
                       A02677; CLHRY2.
A37575; CLHR2A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TaxID=30724,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 d and this statement is not remove s requires a license agreement (S an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RVVRRVVRVVRRVVRRVVRVVR
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                                                                                                                                                                                                                                                                                               72:1419-1432(1972).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7950;
                                                                                                                                                                                                                                                                                                                                                                                     PubMed=4664740;
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19 ATP (POTENTIAL).
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Nucleosome
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core;
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Spermatogenesis; DNA-binding
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Clupeomorpha; Clupeidae;
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L outstation -
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RESULT 13
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Best Local S
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Matches
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15-JUN-2002
15-JUN-2002
15-JUN-2002
Holliday jun
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SEQUENCE FROM N.A.
STRAIN-16M / ATCC 23456 / Biotype 1;
MEDLINE-20020109; PubMed=11756688;
MEDLIVECCHIO V.G., Kapatral V., Redkar R.J., Patra G., Mujer
Ivanova N., Anderson I., Bhattacharyya A., Lykidis A., Rez
Jablonski L., Larsen N., D'Souza M., Bernal A., Mazur M.,
Selkov E., Elzer P.H., Hagius S., O'Callaghan D., Letesson
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P13275;
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Eur. J. Biochem. 169:105-111(1987).
Eur. J. Biochem. 169:105-111(1987).
-I- FUNCTION: INVOLVED IN NUCLEAR BASIC
ARE REPLACED BY SPERMATID SPECIFIC P
REPLACED BY PROTAMINES IN LATE SPERM
-I- SUBCELLULAR LOCATION: NUCLEAR.
-I- SIMILARITY: WITH PROTEIN S2.
                                                                                                                                                                                                                                                                     Bacteria; Proteobacteria;
Brucellaceae; Brucella.
                                                                                                                                                                                                                                                                                                                                                        Holliday junction RUVB OR BMEI0334.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chauviere M., Martinage A., Briand G., Sautiere P., Chevaillier "Nuclear basic protein transition during sperm differentiation. acid sequence of a spermatid-specific protein from the dog-fish
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Testis; DNA condensation; SEQUENCE 30 AA; 4049 M
                                                                                                                                                                                                                                                                                                                          Brucella melitensis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PIR;
                                                                                                                                                                                                                                     NCBI_TaxID=29459;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chromosomal protein; Nucleosome core; Spermatogenesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=88055030; PubMed=3678229;
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19; Conserv
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E 87 AA
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ilarity 54.3%;
Conservative
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41,
DNA
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V; 7F9BBB80F3ADA566 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                           TUVB
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SEQUENCE
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"Primary structures of M6 and M7 of mugiline beta (Mugil japonicus)."
J. Biochem. 101:1017-1024(1987).
-I- FUNCTION: PROTAMINES SUBSTITUTE FOR HISTONES IN THE CHROMATIN OF
SPERM DURING THE HAPLOID PHASE OF SPERMATOGENESIS. THEY COMPACT
SPERM DNA INTO A HIGHLY CONDENSED, STABLE AND INACTIVE COMPLEX.
                                    SEQUENCE FROM N.A.
SPECIES-Human adenovirus type 2;
MEDLINE-85054835; PubMed-6094534;
Alegtroem P., Akusjaervi G., Lager M.,
"Genbs encoding the core proteins of a
J. Biol. Chem. 259:13980-13985(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mugil cephalus (Flathead mullet) (Mugil japonicus).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii, Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Mugilomorpha; Mugilid
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PIR; B26762; B26762.
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16-OCT-2001
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01-AUG-1988
                                                                                                                                                                     Viruses; dsDNA viruses, Viruses; dsDNA viruses; dsDNA viruses; dsDNA viruses;
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01-FEB-1994 (Rel.
16-OCT-2001 (Rel.
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TISSUE SPECIFICITY: TESTIS.
MISCELLANEOUS: THE SEQUENCE OF COMPONENT M6
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5/M7 (Mugiline beta)
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28, Last sequence 40, Last annotation
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Q9KDD8;
15-JUN-2002
15-JUN-2002
15-JUN-2002
SEQUENCE FROM N.A.
STRAINSC-115 / JCM 9153;
MEDLINE=20512582; PubMed=11058132;
Takami H., Nakasone K., Takaki Y.,
Fuji F., Hirama C., Nakamura Y., Og
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; J01917; AAA92212.1;
EMBL; M73260; AAA96408.1;
EMBL; M22141; AAA42520.1;
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MEDLINE=92087470; PubMed=1727603;
Chroboczek J., Bieber F., Chroboczek J., Bieber F.,
"The sequence of the genome of adenovirus
with the genome of adenovirus type 2.";
Virology 186:280-285(1992).
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MEDLINE=83221511; PubMed=6574459;
Sung M.T., Cao T.M., Coleman R.T., Budelie
"Gene and protein sequences of adenovirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR004912; Adeno_VII.
Pfam; PF03228; Adeno_VII; 1.
Core protein; Late protein.
PROPEP 1 24
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                                                                                                                                                             Bacillus halodurans.
Bacteria; Firmicutes;
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                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
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37.5%;
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CLEAVAGE (BY ADENOVIRUS
MISSING (IN REF. 2).
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  Y., Maeno G., S., Ogasawara N.,
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novirus protein
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  Sasaki R.
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Best Local S
Matches 22
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Q96624;
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01-APR-1990
01-AUG-1990
15-JUN-2002
                     use by modified
                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADEB2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pirhonen A., Linnala-Kankkunen A., Maenpaa P.K.;
"Comparison of partial amino acid sequences of two protamine 2
variants from stallion sperm. Structural evidence that the variants
are products of different genes.";
FEBS Lett. 244:199-202(1989).
                                                                                                                                                                                                                     Rusvai M., Harrach B., E
Submitted (OCT-1996) to
                                                                                                                                                                                                                                                        SEQUENCE FROM N.A. Rusvai M., Harrach
                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=114429;
                                                                                                                                                                                                                                                                                                                                                                                        Bovine adenovirus type 2 (Mastadenovirus bos2).
Viruses; dsDNA viruses, no RNA stage; Adenoviri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Major core
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MEDLINE=89171259; PubMed=2924903;
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Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
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Maenpaa P.K.;
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TISSUE SPECIFICITY: TESTIS.
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(Rel. 15, Last sequence update)
(Rel. 41, Last annotation updat
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(Rel. 35, Last sequence update)
(Rel. 40, Last annotation updat
)rotein precursor (Protein VII)
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                                                                                                                                                                                                                 Banrevi A., Evans P., Benko M.;
o the EMBL/GenBank/DDBJ databases.
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                                                                                                                                                                                                                                                                                                                                                                                        RNA stage; Adenoviridae; Mastadenovirus
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2; Mismatches
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RESULT 7
HSP2_PANTR
ID HSP2_PANTR
AC P35300;
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Matches 18
Query Match
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SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
MEDLINE=93292525; PubMed=8513810;
Retief J.D., Dixon G.H.;
Retief J.D., Dixon G.H.;
"Evolution of pro-protamine P2 genes"
Evolution of pro-protamine P2 genes
"Evolution of 214:609-615(1993)."
                                                                                                                                                                                                                                                 MEDLINE=94109373; PubMed=8281927;
Retief J.D., Dixon G.H.;
Eur. J. Biochem. 218:1095-1095 (1993).
-i- FUNCTION: PROTAMINES SUBSTITUTE FOR HISTONES IN THE CHROMATIN (
SPERM DURING THE HAPLOID PHASE OF SPERMATOGENESIS: THEY COMPACT SPERM DNA INTO A HIGHLY CONDENSED, STABLE AND INACTIVE COMPLEX
-i- SUBCELLULAR LOCATION: Nuclear.
-i- TISSUE SPECIFICITY: TESTIS.
-i- SIMILARITY: BELONGS TO THE PROTAMINE P2 FAMILY.
                                             CHAIN
                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Enthe European Bioinformatics Institute. There are no restitute the European Bioinformatics Institute.
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CHAIN
                                  SEQUENCE
                                                                     Chromosomal
Testis; DNA
                                                                                                                   EMBL; X72968; CAA51474.1; PIR; S33331; S33331.
                                                                                                                                                       entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                 modified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pan troglodytes (Chimpanzee).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sperm histone PRM2.
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or send an
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Pfam; PF03228; Adeno_VII;
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                                                                     protein; Nucleosome core;
condensation; Nuclear prot
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precursor (Protamine P2).
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Pred. No. 1.3;
3; Mismatches
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                                  SPERM HISTONE P2.
96EC78ABB8CF64DB
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MAJOR CORE PROTEIN.
CLEAVAGE (BY ADENOVIRUS
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57.5;
No. 0.
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P2).
                                                                               Spermatogenesis; DNA-binding;
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RESULT 3
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SEQUENCE FROM
STRAIN=Dugan;
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P35312;
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                        Retief J.D., Dixon G.H.;
Eur. J. Biochem. 218:1095-1095(1993).

-I- FUNCTION: PROTAMINES SUBSTITUTE FOR HISTONES IN THE CHROMATIN SPERM DURING THE HAPLOID PHASE OF SPERMATOGENESIS. THEY COMPACE SPERM DNA INTO A HIGHLY CONDENSED, STABLE AND INACTIVE COMPLEX SPERM INCOLORISM SUBSTITUTE TESTIS.

-I- SUBCELLULAR LOCATION: Nuclear.
-I- SINGLE SPECIFICITY: TESTIS.
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Submitted (FEB-1992) to the
                                                                                                                                                                                                                                                         Alouatta seniculus (Howler monkey).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Platyrrhini; Cebidae;
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                                                                                                                                                            MEDLINE=93292525; PubMed=8513810;
Retief J.D., Dixon G.H.;
"Evolution of pro-protamine P2 genes in
Eur. J. Biochem. 214:609-615(1993).
                                                                                                                                                                                                SEQUENCE FROM N.A. MEDLINE=93292525;
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L; M86665; AAA42526.1; -.
erPro; IPR004912; Adeno VII.
m; PP03228; Adeno VII; 1.
PEP
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e EMBL/GenBank/DDBJ databases.
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Pred. No.
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MAJOR CORE PROTEIN.
CLEAVAGE (BY ADENOVIRUS PROTEASE)
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red. No. 0.32;
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Alouattinae;
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Matches 19; Conser
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P15343;
01-APR-1990
                                                                                                                                                                                         variants from stallion sperm. Structural evidence t. are products of different genes.";
FEBS Lett. 244:199-202(1989).
-i- FUNCTION: PROTAMINES SUBSTITUTED ---
SPERM DURING TUD ---
SPERM DURING TUD ---
                                                                                                                          PIR;
                                                                                                                                                                                                                                                                                                                     stallion
Biochim.
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15-JUN-2002 (Rel. 41, Last
Sperm histone P2B (ST2B).
Equus caballus (Horse).
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                                                                                        Chromosomal protein; Nucleosome core; Spermatogenesis; DNA-binding; Testis; DNA condensation; Nuclear protein.
SEQUENCE 58 AA; 7979 MW; 8D31F36098A73179 CRC64;
                                                                                                                                                                                                                                                         SEQUENCE OF 1-25,
MEDLINE=89171259; PubMed=2924903;
Pirhonen A., Linnala-Kankkunen A.,
"Comparison of partial amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                       Eŭkaryota; Metazoa; Chordata; Crani:
Mammalia; Eutheria; Perissodactyla;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HORSE
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Maenpaa P.K.;
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                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=90304188; PubMed=2364093;
Pirhonen A., Valtonen P., Linnala
                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
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                                                        Local
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1; Mismatches
                                         Score 59; DB Pred. No. 0.38
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ctyla; Equidae; Equus.
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hat the variants
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Post-processing: Minimum Match 0%
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Maximum DB seq length: 200000000
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Perfect score:
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     64
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Gapop 10.0 , Gapext 0.5
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     SwissProt_40:*
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     80
VCO7_ADE04
VCO7_ADE04
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HSP3_HORSE
HSP3_HORSE
HSP2_HORSE
HSP2_PANTR
PATB MUGCE
VCO7_ADE02
URK BACHD
SS1_SCYCA
RUVB_BRUMC
EV HUH3
SS2_CUPA
RUVB_BRUMC
EV HUH3
ENV_HUH3
FRT2_CLUPA
HSP2_GORGO
HSP2_GORGO
HSP2_FANPA
RUVB_RHIET
SY1_FYRAB
RUVB_RHIET
SY1_RAT
VISB_BPT7
VISB_BPT7
VISB_BPT7
VISB_BPT7
VISB_BPT7
VISB_BPT7
VISB_BPT7
VISB_BPT7
UNADA_METTH
GB12_HUMAN
NADA_METTH
HUMAN
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                                                                                                                                                                                                             Q96831 human adeno.
Q8953 human adeno.
Q895312 alouatta se
P15343 equus cabal
P15343 equus cabal
Q96624 bovine aden
P35300 pan troglod
P08130 mugil cepha
P03266 human adeno
Q9kdd8 bacillus ha
P02335 clupea pall
P13275 scyliorhinu
Q8yiv5 brucella me
Q96626 bovine aden
P55389 rhizobium s
P04624 human immun
P02336 clupea pall
P15336 clupea pall
P15339 pan paniscu
Q91923 rhizobium e
 P19551
P03375
P04578
Q70626
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                                             bacteriopha
ensis minor
methanobact
homo sapien
                                 human
                                                                                                                                               mus musculu
                                                                                                                                                                               pyrococcus
homo sapien
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ID VCO7_ADE04

STANDARY

AC Q96831;

AC Q96831;

DT 01-NOV-1997 (Rel. 35, Created)

DT 01-NOV-1997 (Rel. 35, Last sequence update)

DT 16-OCT-2001 (Rel. 40, Last annotation update)

Major core protein precursor (Protein VII) (pVII).
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VCO7_AD
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Viruses; dsDNA viruses, no RNA stage; Adenoviridae; Mastadenovirus.
NCBI_TaxID=28280;
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Result

Database

ALIGNMENTS

Sequence:

Searched

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| 888 | Q D D D D D A | RESULT VCO7_AI | 유성 | M B Q | SQ TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT | 88888888 | C E E E E E |
| Human adenovirus type 40. Viruses; dsDNA viruses, no RNA stage; Adenoviridae; Mastadenovirus. NCBI_TaxID=28284; | 09552; 01-NOV-1997 (Rel. 35, Created) 01-NOV-1997 (Rel. 35, Last sequence update) 16-OCT-2001 (Rel. 40, Last annotation update) Major core protein precursor (Protein VII) (pVII). | | 2 VVRVVRRVVRRVRRVVRRVVRVVRRVVRRV | Query Match 29.9%; Score 64.5; DB 1; Length 193; Best Local Similarity 40.4%; Pred. No. 0.29; Matches 21; Conservative 6; Mismatches 16; Indels 9; Gaps 3; | EMBL; U70921; AAC83411.1; InterPro; IPR004912; Adeno VII. Pfam; PF03228; Adeno VII; I. PROPEP 1 24 BY SIMILARITY. CHAIN 25 193 MAJOR CORE PROTEIN. SITE 24 25 CLEAVAGE (BY ADENOVIRUS PROTEASE) SEQUENCE 193 AA; 21358 MW; 43137E07DB379DD0 CRC64; | try is copyright. I Institute of Bioin formatics Institutes as a statement is not realizense agreement o license@isb-sib.co | ! ! |

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Chin, C.W.; Chung, M.K.; Conn., L.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dewar, K.; ansen, N.F.; Hughes, B.; Huizar, L.
Nature 408, 816-820, 2000
A;Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, C.C.A.; Li, J.H.; Li, Y.; Lin, X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marziali, Rizzo, M.; Rooney, T.; Rowley S. Sakano, H.
A;Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, H.; Tallon, ker, M.; Wu, D.; Yu, G.; Fraser, C.M.; Venter, J.C.; Davis, R.W.
A;Title: Sequence and analysis of chromosome 1 of the plant Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 31-Mar-2001
C;Accession: E6215
B:Thanlacia
                                                                                                                                                                                                                                                    C; Date: T29385
C; Accession: T29385
R; Geisel, C.; Bradshaw, H.
submitted to the EMBL Data Library,
submitted to the sequence of C. el
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T29385
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A;Residues: 1-25 <PI2>
C;Superfamily: sperm histone
C;Keywords: DNA binding; nucleus
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                                                                                                                                                                                                           A; Description: The sequence
A; Reference number: Z20616
A; Accession: T29385
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                                                                                                                                               A; Molecule type: DNA
A; Residues: 1-312 <GEI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                         A; Experimental source:
                                                                                                                                                                                                                                                                                                                                      hypothetical protein K08D10.6 - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Sate: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999
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A;Residues: 1-263 <STO>
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Best Local S
Matches 16
                                            ;Map
                                                                                                    ;Cross-references: EMBL:U55857; PIDN:AAA98030.1; GSPDB:GN00022; CESP:K08D10.6;Experimental source: strain Bristol N2; clone K08D10
                                                                                                                                                                                     Status: preliminary; translated from GB/EMBL/DDBJ
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Pred. No. 11;
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elegans
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  Score
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  58;
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cosmid K08D10.
  DB.
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Eur. J. Biochem. 214, 609-615, 1993
A;Title: Evolution of pro-protamine P2 genes in primates.
A;Reference number: S33331; MUID:93292525; PMID:8513810
A;Accession: S33331
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S33331
                                                                                                                                                                                         C; Superfamily: sperm histone C; Keywords: DNA binding; nucleus
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C;Species: Pa
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                                                                                                                                                                                                                                                                                                 A; Molecule type: DNA
A; Residues: 1-102 < RET>
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R;Retief, J.D.; Dix
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                                                                                                                        Query Match
Best Local S
Matches 19
                                                                                                                                                                                                           Superfamily: sperm histone
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Species: Pan troglodytes (chimpanzee)
Date: 08-Dec-1993 #sequence_revision 26-May-1995 #text_change 23-Jul-1999
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                                                      61 RRLRRIHROOHRSCRRRKRRSCRHRRKHRRGCRTRRRTCRR 10:
                                                                                       11 RRVRRVVRRVVRRVVRRVVRRV---RRVVRRVVRVVRRVVRR 48
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llarity 46.3%;
Conservative
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 2003, 12:03:12
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Search completed: June Job time: 20.9149 secs

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major membrane cytoskeletal protein articulin, 86K - Euglena gracilis C;Species: Buglena gracilis C;Species: Buglena gracilis C;Date: 20-Feb-1995 #sequence c;Accession: B43417; S24610  
R;Marrs, J.A.; Bouck, G.B.
J. Cell Biol. 118, 1465-1475, 1992
A;Title: The two major membrane skeletal proteins (articulins) of Euglena gracine states of the states o
RESULT
T42050
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A;Note: the authors did not translate the codon for residue 1
C;Genetics:
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C:Date: 08-Dec-1993 #sequence_revision 26-May-1995 #text_change 23-Jul-1999
C:Accession: S33338
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C; Superfamily: s
C; Keywords: DNA
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Bur. J. Biochem. 214, 609-615, 1993

A;Title: Evolution of pro-protamine P2 genes in primates.

A;Reference number: S33331; MUID:93292525; PMID:8513810
                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: EMBL:Zl3963; NID:gl8405; PID:gl8406
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A; Residues: 1-100 <R
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A;Note: sequence extracted from NCBI backbone (NCBIP:113032)
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Best Local (
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Best Local
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Keywords: DNA binding; nuc
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                                                                                                                                                                                                                                                                                                          Similarity
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                                                                                                                               VERRVPVPVEQIVERVVQV-----PVERLVEKVVQVHRQV 233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RRLYRVHRRQRRSCRRRCCRYRRRNRRGCRTRRRTCRR 99
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Pred. No. 20;
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Pred. No. 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 60; DB 2; Length 100; Pred. No. 3.7;
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A;Status: preliminary
A;Molecule type: protein
A;Mesidues: 1-62 eFIR>
R;Pirhonen, A.; Linnala-Kankkunen, A.; Maeenpaeae, P.H
FEBS Lett. 244, 199-202, 1989
                                                                                                                                                                                       protamine St2a - horse
C;Species: Equus caballus (domestic horse)
C;Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text_change 15-Oct-1999
C;Accession: S10754; S02786
R;Pirhonen, A.; Valtonen, P.; Linnala-Kankkunen, A.; Heiskanen, M.L.; Maeenpaeae, Biochim. Biophys. Acta 1039, 177-180, 1990
A;Title: Primary structures of two protamine 2 variants (St2a and St2b) from stall A;Reference number: S10754; MUID:90304188; PMID:2364093
A;Accession: S10754
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S10754
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submitted to the EMBL Data Library,
..paference number: Z22041
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C;Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text_change 15-Oct-1999
C;Accession: S10755; S02787
R;Pirhonen, A.; Valtonen, P.; Linnala-Kankkunen, A.; Heiskanen, M.L.; Maeeng Biochim. Biophys. Acta 1039, 177-180, 1990
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A;Residues: 1-58 <PIR>
R;Pithonen, A; Linnala-Kankkunen, A.; Maeenpaeae, P.H
FEBS Lett. 244, 199-202, 1989
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A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-513 <CUL>
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C;Species: Streptomyces coelicolor
C;Species: Streptomyces coelicolor
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 03-Dec-1999
C;Accession: T42050
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22; Conservative
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35.1%;
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Pred. No. 2,
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Pred. No. 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18;
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hypothetical protein jhp0953
C;Species: Helicobacter pylor
A;Variety; grmain Tro
                                                 RESULT 5.
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A;Reference number: 217603
A;Accession: T13097
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T13097
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Variety: strain HST
C;Date: 21-Jan-2000 #sequence_revision 21-Jan-2000 #text_change 21-Jul-2000
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A;Experimental source: strain HST; pop. variant B
A;Accession: T44057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R;Isegawa, Y.; Mukai, T.; Nakano, K.; Kagawa, M.; Chen, J.; Mori, Y.; Sunagawa, T. Virol. 73, 8053-8063, 1999
A;Title: Comparison of the complete DNA sequences of human herpesvirus 6 variants A;Reference number: Z22732; MUID:99412319; PMID:10482554
A;Accession: T43950
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                                                                                                                                                                                                                                                                                                                                      A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                      ;Residues: 1-115 <IS2>
;Cross-references: EMBL;AB021506; NID:g4995977; PIDN:BAA78211.1;
;Experimental source: strain HST; pop. variant B
                                                                                                                                                                                                                                                                                                                                                                                                                         ;Molecule type: DNA;Residues: 1-115 <ISE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ypothetical protein LTI [imported];Species: human herpesvirus 6
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                                                                                                                                                                                                                                                        Gene:
                                                                                                                                                                                                                                                                                                                                                        Status: preliminary; translated from GB/EMBL/DDBJ
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Best Local
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Best Local
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tail completion protein gp11
              pylori
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                               Helicobacter pylori (strain
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                                                                                                                                                                                                     Score 62.5; DI
Pred. No. 2.3;
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Pred. No. 1.9;
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RESULT 7
S24609
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A;Title: Genomic sequence comparison of two unrelated isolates of the human gastric path
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R;Thompson, J.; Choudhury, S.; Kashanchi, F.; Doniger, J.; Berneman, Z.; Frenkel, N.; Oncogene 9, 1167-1175, 1994
A;Title: A transforming fragment within the direct repeat region of human herpesvirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Reference number: A71800; MUID:99120557; PMID:9923682 A;Accession: B71866
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A;Accession: S43070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Species: human herpesvirus 6
C;Date: 07-Sep-1994 #sequence_revision 10-Nov-1995 #text_change 08-Oct-1999
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A; Residues: 1-74 < ARN>
                                          A; Accession: A43417
                                                               A; Reference number: A43417; MUID: 92394973;
                                                                                    A; Title: The two major membrane
                                                                                                           R;Marrs, J.A.; Bouck, G.B.
J. Cell Biol. 118, 1465-1475, 1992
                                                                                                                                                                            A; Molecule type: mRNA
A; Residues: 1-651 < BO
                                                                                                                                                                                                                                           A; Reference number: A; Accession: S24609
                                                                                                                                                                                                                                                                   submitted to the EMBL Data A; Reference number: S24609
                                                                                                                                                                                                                                                                                                                 R; Bouck, G.B.
                                                                                                                                                                                                                                                                                                                                                                                                   cytoskeletal protein - Euglena gracilis
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A; Residues: 1-331 <THO>
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                                                                                                                                                       \;Cross-references: EMBL:Z13962; NID:g18403; PID:g18404
                                                                                                                                                                                                                                                                                                                                  ;Species: Euglena gracilis
;Date: 20-Feb-1995 #sequence_revision 20-Feb-1995
;Accession: S24609; A43417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cross-references: GB:AE001525; GB:AE001439; NID:g4155533; PIDN:AAD06535.1; PID:g41555;
Experimental source: strain J99
                                                                                                                                                                                                                      Status: preliminary
Status: preliminary; not compared with conceptual translation; Molecule type: nucleic acid
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uman herpesvirus 6
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46.8%; Pred.
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                                                                 skeletal proteins (articulins) of Euglena gracilis defi
):92394973; PMID:1522117
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                                                                                                                                                                                                                                                                                            1992
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 331;
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Minimum DB Maximum DB Result Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 s Scoring table: Sequence: OM protein - protein search, using sw model Database Total number of hits satisfying chosen parameters: Perfect score: Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution. Score 55.5 55.5 55.5 57.55 57.55 57.55 57.55 57.55 57.55 57.55 61 60.5 60 60 59.5 62.5 seq length: 0 seq length: 2000000000 58959 Match Length PIR_73:* 1: pir1:* 2: pir2:* 3: pir3:* 4: pir4:* Query 283224 seqs, 96134422 residues Gapop 10.0 , Gapext 0.5 BLOSUM62 June 34.5 GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd 9, 2003, 11:48:06; Search time 19.9149 Seconds (without alignments) 231.709 Million cell updates/sec 894 1153 33 1184 1115 74 331 651 1000 650 513 513 513 513 263 312 2102 1102 BB \$2460 \$3338 \$24610 \$14050 \$10754 \$107 T43950 B71866 S43070 IJ C84477 summaries SUMMARIES 283224 probable transposa protamine St2b - h protamine St2a - h protein T6D22.16 [hypothetical prote hypothetical prote hypothetical prote hypothetical prote cytoskeletal prote protamine P2 - red major membrane cyt protamine YII -protamine YII uridine kināse udk transposase alr714 hypothetical protamine P2 hypothetical arginine-rich hypothetical Description major core protein protamine nypothetical protamine beta-adaptin homo] beta-adaptin probable minor 48 (mugilin (mugilin homol prote chi prote prote

| 2 JN0582 p 2 P85355 h 2 P85355 h 2 P34702 h 2 T34702 p 1 CLHRZA p 1 S33333 p 2 S33333 p 2 S33333 p 2 S33336 p 2 F84538 h 2 P84538 h 2 P84538 h 3 P84538 h 3 P84538 h 4 P55139 h 5 P84538 h 6 P84538 h 6 P84538 h 7 P84538 h | 5 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 |
|--|--------|--------|---------|----------|----------|-------------------|--------------|-----------|-----------|-----------|-----------|----------|--------------|--------------|-----------|--------------|
| 355 2 T24010 34 2 JN0582 180 2 F83355 533 2 A72593 1 CLHRZ 31 1 CLHRZA 31 1 CLHRZA 102 2 S33333 102 2 S33333 102 2 S33333 102 2 B69435 471 2 E69435 5728 2 F84590 1067 2 H75139 | 53 | 53 | 53 | 53 | 53 | 53.5 | 53.5 | 53.5 | 53.5 | 53.5 | 53.5 | 54 | 51 44 | 54.5 | 54.5 | 55.5 |
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| T24010 JN0582 P83355 R98355 R134793 R12793 R13373 C14RZA C14RZA C14RZA C14RZA C14RZA C14RZA C14RZA C1503333 G150333 G150323 G1 | 1067 | 728 | 554 | 471 | 233 | 601 | 105 | 102 | 102 | 31 | 31 | 540 | 533 | 180 | 34 | 355 |
| P | N | ນ | N | N | N | N | N | N | N | _ | _ | N | N | N | N | N |
| hypothet protamin hypothet hypothet hypothet protamin protamin protamin probable probable probable hypothet hypothet hypothet hypothet isoleucy | H75139 | F84500 | T15438 | E69435 | C95987 | T36323 | AG1926 | S33332 | 833333 | CLHRZA | CLHRZ | T34702 | A72593 | F85355 | JN0582 | T24010 |
| hypothet protamin hypothet hypothet hypothet protamin protamin protamin protamin hypothet probable probable probable hypothet hypothet hypothet isoleucy | | | | | | • | | | | | | | | | | |
| | isoleı | hypoth | hypothe | hypother | probable | probable membrane | hypothetical | protamine | protamine | protamine | protamine | hypothet | hypothetical | hypothetical | protamine | hypothetical |

ALIGNMENTS

hypothetical protein At2906420 [imported] - Arabidopsis thaliana (Species: Arabidopsis thaliana (mouse-ear cress) (c;Species: Arabidopsis thaliana (mouse-ear cress) (c;Date: 02-Feb-2001 #sequence_revision 02-Feb-2001 #text_change 02-Feb-2001 C;Accession: C84477 (C;Accession: C84477 (R;Lin, X.; Kaul, S.; Rounsley, S.D.; Shea, T.P.; Benito, M.I.; Town, C.D.; Fujii, C.Y.; M.; Koo, H.; Moffat, K.S.; Cronin, L.A.; Shea, M.; VanAken, S.E.; Umayam, L.; Tallon, L. euss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, L. auss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, L. auss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, L. auss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, L. auss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, L. auss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, L. auss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, L. auss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, L. auss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, L. auss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, L. auss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, L. auss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, L. auss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, L. auss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, L. auss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, L. auss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, L. auss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, L. auss, D.; Nierman, W.C.; White, O.; Eisen, D.; Nierman,

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C;Geneti
A;Note:
                                                                                                                                                                                                                                                                                                                                                                  RESULT 2
T17699
                                                                                                          A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-114 <GRA>
A;Cross-references: EMBL:U42580; NID:g4028896; PIDN:AAC96577.1
A;Experimental source: specific host Chlorella strain NC64A
A;Experimental source: specific host Chlorella strain NC64A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Title: Sequence and analysis of chromosome 2 of the plant Arabidopsis thaliana. A;Reference number: A84420; MUID:20083487; PMID:10617197 A;Accession: C84477
                                                                                                                                                                                                         submitted to the EMBL Data A; Reference number: Z18806 A; Accession: T17699
                                                                                                                                                                                                                                                                                     C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999 C;Accession: T17699
                                                                                                                                                                                                                                                                                                                          arginine-rich protein a209R - Chlorella virus PBCV-1
C;Species: Chlorella virus PBCV-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: DNA
A; Residues: 1-349 <STO>
                                                                                                                                                                                                                                                                       R;Graves,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Status: preliminary
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gene: At2g06420
 Matches
             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
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                                                                                                                                                                                                                                                                       M. V. ;
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Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
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                 30.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      34.5%; Score 74.5; 1
41.3%; Pred. No. 0.3!
:ive 10; Mismatches
                                                                                                                                                                                                                                               Library,
                 Score 65; 1
Pred. No. 1
                                                                                                                                                                                                                                                 May 1999
 Mismatches
                                   DB 2; Length 114;
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,35;
 14; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 9; Conserv
              FILING DATE: 06-04-93
APPLICATION NUMBER: 08/148,491
FILING DATE: 11-08-93
APPLICATION NUMBER: 08/148,889
FILING DATE: 11-08-93
ATTORNEY/AGENT INFORMATION:
NAME: MASSERMAN, FRAN S.
REGISTRATION NUMBER: 34,273
REFERENCE/DOCKET NUMBER: 4013-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: JOAN GARBARINO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: 202-783-6031
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: 1in MOLECULE TYPE: HYPOTHETICAL: 1 FRAGMENT TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.4 MB STORAGE
COMPUTER: APPLE MACINTOSH
OPERATING SYSTEM: MACINTOSH
SOFTWARE: M.S. WORD 5.0
                                                                                                                                                                                         APPLICATION NUMBER: 08/279,472
FILING DATE: JULY 22, 1994
APPLICATION NUMBER: 08/225,476
FILING DATE: 04-20-94
APPLICATION NUMBER: 08/225,476
FILING DATE: 04-08-94
APPLICATION NUMBER: 08/039,620
                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 19-FEB-1
FILING DATE: 19-FEB-1
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REGISTRATION NUMBER: 40,315
REFERENCE/DOCKET NUMBER: 2093-120
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-783-6040
                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: UBIQUITIN-LYTIC PEPTIDE FUSION GENE CONSTRUCTS, PROTEIN PRODUCNUMBER OF SEQUENCES: 98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: JESSE M. JAYNES
APPLICANT: WILLIAM BELKNAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: No. 6001805ember, 8, ATTORNEY/AGENT INFORMATION:
NAME: Mark I. Bowditch
ELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: STEVEN J. HULTQUIST
ADDRESSEE: INTELLECTUAL PROPERTY/TECHNOLOGY LAW
STREET: 200 PARK DRIVE, SUITE 210
STREET: P.O. BOX 14329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: RESEARCH TRIANGLE PARK
STATE: NORTH CAROLINA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS
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19-FEB-1997
און חמייי
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                    4013-104
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FRAGMENT TYPE: COMPLETE PEPTIDE
ORIGINAL SOURCE: SYNTHETIC
IMMEDIATE SOURCE: SYNTHETIC
PUBLICATION INFORMATION: NOT PREVIOUSLY PUBLISHED
US-08-801-028-23
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                                                                                 Query Match 31.6%; Score 60; DB 3; Length 37; Best Local Similarity 26.5%; Pred. No. 0.071; Matches 9; Conservative 15; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                          TELEPHONE: (919)990-9531
TELEFAX: (919)990-9532
INFORMATION FOR SEQ ID NO: 2:
                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                   TOPOLOGY: L:
                                                                                                                                                                                                                                                                                               DESCRIPTION:
                                                                                                                                                                                                                                                                                                                                                                                LENGTH:
3 KKFVKKVAKVAKKVAKKVAKKVAKKVAK 36
                                         1 RRVVRRVRRVVRRVVRRVVRRVVRRVVR 34
                                                                                                                                                                                                                                                                                                                                                          AMINO ACID
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Search completed: June 9, 2003, 12:05:07 Job time: 14.2979 secs

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HYPOTHETICAL: NO
FRAGMENT TYPE: COMPLETE PEPTIDE
ORIGINAL SOURCE: SYNTHETIC
IMMEDIATE SOURCE: SYNTHETIC
PUBLICATION INFORMATION: NOT PREVIOUSLY PUBLISHED
US-08-457-171-23
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US-08-505-486-23
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
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NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER: 40
TELECOMMUNICATION INFORMATION:
TELEPHONE: (919) 990-9531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: HULTQUIST, STEVEN J.
                CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/505,486
FILING DATE: 21-JUL-1995
                                                                                                                                   COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                   APPLICANT: Jesse M.
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
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MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.4 MB STORAGE
COMPUTER: APPLE MACINTOSH
                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 91
                                                                                                                                                                                                                                                                                        ITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/225, FILING DATE: 04-08-94
APPLICATION NUMBER: 08/039,620
FILING DATE: 06-04-93
APPLICATION NUMBER: 08/148,491
FILING DATE: 11-08-93
                                                                          MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.4 MB STORAGE COMPUTER: IBM COMPATIBLE OPERATING SYSTEM: DOS
                                                                                                                                                                                      STREET: 555
CTTY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 01
FILING DATE: 11-08-93
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/08/457,171
                                                                  SOFTWARE:
                                                                                                                                                                    COUNTRY:
CLASSIFICATION:
                                                                                                                                                                                                                                         ADDRESSEE:
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GY: LINEAR
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                                                                                                                                                                                                                       E: ROTHWELL, FIGG, ERNST & KURZ
555 Thirteenth Street N.W.
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                                                                                                                                                                      USA
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                                                               WordPerfect 5.1+
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              21-JUL-1995
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                                                                                                                                                                                                                                                                         JAYNES
UBIQUTIN-LYTIC PEPTIDE FUSION GENE
CONSTRUCTS, PROTEIN PRODUCTS DERIVING THEREFROM, AND
METHODS OF MAKING AND USING SAME
98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08/148,889
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Patent No. 6001805
GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                  APPLICATION NUMBER: US/08/689,489C
FILING DATE: AUGUST 12, 1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/231,730
FILING DATE: April 20, 1994
PRIOR APPLICATION NUMBER: US 08/225,476
FILING DATE: April 8, 1994
PRIOR APPLICATION DATA:
APPLICATION APPLICATION DATA:
PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FRAGMENT TYPE: COMPLETE PE ORIGINAL SOURCE: SYNTHETIC IMMEDIATE SOURCE: SYNTHETI
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REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)783-6040
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                FILING DATE: No. 6001805ember 8, PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                   SOFTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION:
TITLE OF INVENTION:
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                                                                     PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE:
                                                                                  APPLICATION NUMBER: US 08/039,620 FILING DATE: June 4, 1993
                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY: U
ZIP: 20004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET:
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APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                 STATE: DC
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                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   POPOLOGY: LINEAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ENGTH:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 RRVVRRVRRVVRRVVRRVVRRVVRRVVR 34
                                                                                                                                                                                                                                                                                                                                                                                                                                              Washington
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AMINO ACID
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OR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Jesse M. Jaynes,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rothwell,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-JUL-1994
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31.6%; Score 60; DB.2; Length 37; 26.5%; Pred. No. 0.071;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ell, Figg, Ernst & Kurz
STREET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Method of Enhancing Wound Healing By
Stimulating Fibro-blast and Keratino
Vivo, Utilizing Amphipathic Peptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        U.S.
                                                08/148,889
08/148,491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NOT PREVIOUSLY PUBLISHED
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                                   1993
                                                                                                                                                                                                                                                                                                       Version #1.30
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US-08-457-798-23
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                                                                                          RESULT 11
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                                Sequence 23, Appli
Patent No. 5744445
                                                                                                                                                                                                                  Query Match 31.6%;
Best Local Similarity 26.5%;
Matches 9; Conservative 1
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                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (202)783-6031
INFORMATION FOR SEQ ID NO: 23:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: JULIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY AGENT INFORMATION:
NAME: WALKER, BARBARA W.
REGISTRATION NUMBER: 35,400
REFERENCE/DOCKET NUMBER: 2093-105A
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 783-6040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: METHYLATED LYSINE-RICH
TITLE OF INVENTION: AND METHOD OF MAKING T
NUMBER OF SEQUENCES: 38
CORRESPONDENCE ADDRESS:
ADDRESSEE: ROTHWELL, FIGG, ERNST & KURZ
STREET: 555 Thirteenth Street, N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGINAL SOURCE: SYNTHETIC
IMMEDIATE SOURCE: SYNTHETIC
PUBLICATION INFORMATION: NOT PREVIOUSLY PUBLISHED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/427,001C
FILING DATE: 24-APR-95
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: U.S.08/148,889
FILING DATE: 08-NOV-93
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.4 MB STORAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM COMPATILE OPERATING SYSTEM: DOS SOFTWARE: Wordperfect
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CITY: Washington
                                                                                                                                                                                                                                                                                                                                TYPE: AMINO ACID TOPOLOGY: LINEAR
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                                                                                                                                               KKFVKKVAKVAKKVAKKVAKKVAKKVAKVAK 36
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                                                     Application US/08457798
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METHYLATED LYSINE-RICH LYTIC PEPTIDES,
AND METHOD OF MAKING THE SAME BY REDUCTIVE ALKYLATION
JESSE M.
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                                                                                                                                                                                                                                       Score 60; DB 1; Length 37; Pred. No. 0.071;
                                                                                                                                                                                                                      Mismatches
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; Patent No. 5773413
; GENERAL INFORMATION:
APPLICANT: JAYNES, J
APPLICANT: JULIAN, G
                                                                                                                                                                                                                                                                                              US-08-457-171-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-457-798-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FRAGMENT TYPE: COMPLETE PEPTIDE ORIGINAL SOURCE: SYNTHETIC IMMEDIATE SOURCE: SYNTHETIC PUBLICATION INFORMATION: NOT PREVIOUSLY PUBLISHED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 19930604
ATTORNEY/AGENT INFORMATION:
NAME: HULTQUIST, STEVEN
REGISTRATION NUMBER: 280
REFERENCE/DOCKET NUMBER:
                                                                                                                                            TITLE OF INVENTION: ME
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HYPOTHETICAL: NO
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM: MEDIUM TYPE: DISKETTE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES: 3
CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: M.S. WORD 5.0 CURRENT APPLICATION DATA:
                                                                    ADDRESSEE: STEVEN J. HULTQUIST
ADDRESSEE: INTELLECTUAL PROPERTY/TECHNOLOGY LAW
STREET: 200 PARK DRIVE, SUITE 210
STREET: P.O. BOX 14329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: APPLE I
OPERATING SYSTEM:
SOFTWARE: M.S. W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET: 150 F/
CITY: RALEIGH
                                                   CITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DESCRIPTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY: USA
ZIP: 27601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: JESSE M. JAYNES,
ADDRESSEE: DEMETER BIOTECHNOLOGIES, LTD.
STREET: 150 FAYETTEVILLE ST. MALL, SUITE 2700
                 COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                 3 KKFVKKVAKVAKKVAKKVAKKVAKKVAK 36
                                                                                                                                                                                                                                                                                                                                                                                                     1 RRVVRRVRRVVRRVVRRVVRRVVRRVVR 34
                                                                                                                                                                                                                                                                                                                                                                                                                                         h 31.6%; Score 60; DB Similarity 26.5%; Pred. No. 0.0' 9; Conservative 15; Mismatches
27709
                                                   RESEARCH TRIANGLE PARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AMINO ACID
                                NORTH CAROLINA
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                                                                                                                                                                                                                                                                          Application US/08457171
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SYSTEM: MACINTOSH
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                                                                                                                                                                                GORDON R.
METHOD OF COMBATTING
                                                                                                                                                                                                                      JESSE M.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AMPHIPATHIC PEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              METHOD OF TREATING PULMONARY DISEASE STATES WITH NON-NATURALLY OCCURRING
                                                                                                                                                                 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US/08/039,620A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1; Length 37;
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                                                                                                                                                                                MAMMALIAN NEOPLASIA,
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                                                                                                                                                                                AND LYTIC PEPTIDES
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US-08-932-682-160
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Patent No. 5945507
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -08-786-748A-160
                                                      OPERATING SYSTEM: MS-DOS
SOFTWARE: FASTSEQ Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/932,682
FILING DATE: 18-SEP-1997
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
OR/786.748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   atent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
           APPLICATION NUMBER: 08/70
FILING DATE: 24-JAN-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: No. 5714577e
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FILING DATE: 26-JAN-1996
ATTORNEY/AGENT INFORMATION:
NAME: Rochelle K. Seide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
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MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Tencza, Sarah B.
APPLICANT: Mietzner, Timothy A.
TITLE OF INVENTION: NOVEL ANTIMICROBIAL PEPTIDES
                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Ronald, Montelaro C.
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OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                              STATE: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Match 32.6%; Score 62; DB 1; Length 28; Local Similarity 42.9%; Pred. No. 0.03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRANDEDNESS: single TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REGISTRATION NUMBER: 32,300
REFERENCE/DOCKET NUMBER: AP30421
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/0: FILING DATE: 24-JAN-1997
                                                                                                                                                                                                                                                         COUNTRY: USA
ZIP: 10112-0228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE:
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                                                                                                                                                                                                                                                                                                                               STREET:
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                                                                                                                                                                                                                                                                                                                               E: BAKER & BOTTS, L.L.P.
30 Rockefeller Plaza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/08932682
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Seide
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                                                  08/786,748
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; MOLECULE TYPE:
US-08-932-682-160
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 32.6%;
Best Local Similarity 42.9%;
Matches 12; Conservative
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                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/08/231,73
FILING DATE: 04-20-94
PRIOR APPLICATION DATA:
APPLICATION UNMBER: 08/225,476
FILING DATE: 04-08-94
APPLICATION NUMBER: 08/039,620
FILING DATE: 06-04-93
APPLICATION NUMBER: 08/148,491
FILING DATE: 11-08-93
APPLICATION NUMBER: 08/148,889
FILING DATE: 11-08-93
APTICRATEY/AGENT INFORMATION:
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                                                                                                                                           TELEPHONE: (919)990-9
TELEFAX: (919)990-953
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM: MEDIUM TYPE: DISKETT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: M.S. WORD 5.0 CURRENT APPLICATION DATA:
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                                                                                                                          SEQUENCE CHARACTERISTICS:
                                  DESCRIPTION:
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                                                                                                                                                                                                                   NAME: HULTQUIST, STEVEN J.
REGISTRATION NUMBER: 28021
REFERENCE/DOCKET NUMBER: 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: 200 PARK DRIVE, SUITE 210 STREET: P.O. BOX 14329 CITY: RESEARCH TRIANGLE PARK
                                                                    LENGTH: 37
TYPE: AMINO ACID
TOPOLOGY: LINEAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OPERATING SYSTEM:
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                                                                                                                                                              : (919)990-9531
(919)990-9532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLE MACINTOSH
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COMPLETE PEPTIDE
                                    PEPTIDE
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GORDON R.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MACINTOSH
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                                                                                                                                                                                                                       4013-106
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Pred. No. 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1.4 MB STORAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 2;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: (515) 245-363
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                  TELEPHONE: (515) 248-48
TELEPAX: (515) 334-6883
INFORMATION FOR SEQ ID NO:
                                                                                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 31 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER: 02
TELECOMMUNICATION INFORMATION:
TELEPHONE: (515) 245-3594
TELEPAX: (515) 245-3634
                                                  MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER: 02
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/079,512
                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: SYNTHETIC ANTIMICROBIAL PEPTIDES NUMBER OF SEQUENCES: 22
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Rao, Gururaj A.
APPLICANT: Zhong, Lingxiu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE: protein
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NAME: Roth, Michael J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRICE APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: FILING DATE: 12-MAY CLASSIFICATION: 530
                                                                                 STRANDEDNESS
                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
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                                                                   TOPOLOGY:
                                                                                                                                                                                                                                   NAME: Bobrowicz, Donna REGISTRATION NUMBER: 3:
                                                                                                                                                                                                                                                                                       FILING DATE: 18-JUN-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
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                                                                   Linear
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33.7%;
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3ER: 023
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Pred. No. 0.019;
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Score 64;

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                                                                                                                                            Patent No.
                                                                                                                                                Sequence 160, Application US/08786748A Patent No. 5714577
                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                          Query Match
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                                                                                                                               GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: (515) 248-4844 INFORMATION FOR SEQ ID NO:
                                                                              APPLICANT: Ronald, Montelaro C. APPLICANT: Tencza, Sarah B. APPLICANT: Mietzner, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 31 amino acids
                          NUMBER OF SEQUENCES: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION: TELEPHONE: (515) 248-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: Pioneer Hi-Bred International, Inc
STREET: 700 Capital Square, 400 Locust Street
                                                              TITLE OF INVENTION:
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CITY: Des Moines
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                                                                                                                                                                                                                                                                                                                         Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: FILING DATE:
 STREET:
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                  ADDRESSEE:
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                                                                                                                               INFORMATION:
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                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                              RRIYRAIRHIPRRIRGWLRRIGRRIERV 28
                                                                                                                                                                                                                                                                                                                                                                                                                                        amino acid
E: Brumbaugh, Graves,
30 Rockefeller Plaza
                                                Mietzner, Timothy A.

VVENTION: NOVEL ANTIMICROBIAL PEPTIDES
                                                                                                                                                                                                                                                                                                             Conservative
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linear
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                                                                                                                                                                                                                                                                                                                         33.7%;
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Pred. No. 0.
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                                                                                                                                                                                                                                                                                                             Mismatches
                Donohue & Raymond
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                                                                                                                                                                                                                                                                                                                           DB 5;
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PUBLICATION INFORMATION:

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TYPE: PAT
; ORGANISM: Sorangium cellulosum
US-09-413-814-78
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No. 622506
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Best Local Similarity 48.6%;
Matches 18; Conservative
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SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 78
                                                                                                                                                                                                           Sequence 5, Appli
Patent No. 591976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
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CURRENT FILING DATE: 1999-10-07
EARLIER APPLICATION NUMBER: DE 198 46 493.2
EARLIER FILING DATE: 1998-10-09
                                                                                                                                                                      GENERAL INFORMATION: APPLICANT: Wakefi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PPLICANT: Mueller, Joachim
APPLICANT: Reichenbach, Hans
ITTLE OF INVENTION: DNA sequences for enzymatic synthesis of polyketide or
ITTLE OF INVENTION: heteropolyketide compounds
FILE REFERENCE: PCT/US 99/23535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Gesellschaft fuer Biotechnologische Forschung mbHAPPLICANT: Bristol-Myers Squibb, Co.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PPLICANT: Bloecker, Helmut
                                                        APPLICANT: Andrews, Philip C.
APPLICANT: Stanley, James C.
TITLE OF INVENTION: HEPARIN AND LOW MOITIFE OF INVENTION: WEIGHT HEPARIN
TITLE OF INVENTION: ANTICOAGULATION RE
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                                                                                                                                                                                                                                                                                                                                                                                                 594 RRARHRARRAPRRVRRLVGRRLRRRARRALRRLRAGPAFPAAGAPGAVRRLRRSPAGVAV 653
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Cino, Paul M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Dougherty, Brian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RRAARRARRARR----ARRAARRARRARRARRGVK 35
                                                                                                                                                                                                                           Application US/08436703B
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                                                                                                                                                  Wakefield, Thomas W. Andrews, Philip C.
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Benita J, Rohm, Esq
                       ADDRESS:
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                                                        ANTICOAGULATION REVERSAL
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Pred. No. 0.054;
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Pred. No. 0.0017
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                                                                                             LOW MOLECULAR
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US-08-179-632-9
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Patent No. 5607914
GENERAL INFORMATION:
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                             SOFTWARE: Microsoft Windows No. 5607914epad CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/179,632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC compatible OPERATING SYSTEM: MS-DOS SOFTWARE: WordPerfect 6; SOFTWARE: ASCII (DOS) Text CURRENT APPLICATION DATA:
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NAME: Rohm, Benita J
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APPLICATION NUMBER: N/A
FILING DATE: N/A
                                                                                                               COMPUTER READABLE FORM: MEDIUM TYPE: Diskett
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MEDIUM TYPE: Floppy
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ORIGINAL SOURCE:
                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                 TITLE OF INVENTION:
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                                                                                                                                                                                STREET: CTTY: Des Moines
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                                                                            COMPUTER: IBM Compatible OPERATING SYSTEM: MS-DOS.
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                                                                                                                                                COUNTRY: UI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS:
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CLASSIFICATION:
                                                                                                                                                                                                             ADDRESSEE: Pioneer Hi-Bred International, Inc
STREET: 700 Capital Square, 400 Locust Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      l Similarity 50.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 RRVVRRVRRVVRRVVRRVVRRVVRRVVRRVVR 34
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                                                                                                                                                                United States
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                                                                                                               Diskette,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08-MAY-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        peptide
                 07-JAN-1994
                                                                                                                                                                                                                                                                          Gururaj; Zhong, Lingxiu
SYNTHETIC ANTIMICROBIAL PEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    36.8%;
                                                                                MS-DOS/Microsoft Windows
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                                                                                                             3.5 inch, 1.44 Mb storage
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Pred. No. 0.00
0; Mismatches
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Result
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               is derived by analysis of the total score distribution.
        protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            262574 seqs, 29422922 residues
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190
       Issued_Patents_AA:*

1: /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
2: /cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
3: /cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
4: /cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
5: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
6: /cgn2_6/ptodata/1/iaa/backfiles1.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
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                 US-08-786-748A-160
US-08-31-730A-23
US-08-427-001C-23
US-08-457-798-23
US-08-457-798-23
US-08-457-171-23
US-08-457-171-23
US-08-689-489C-23
US-08-689-489C-23
US-08-6810-28-23
US-09-232-802A-23
US-09-332-611B-23
PCT-US94-06176-23
PCT-US95-04335-23
PCT-US95-04718-23
PCT-US95-04718-23
PCT-US95-04718-23
PCT-US95-04718-23
PCT-US95-09338-23
US-08-688-255-5
US-08-688-255-5
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US-08-179-632-9
US-08-440-174A-9
PCT-US95-00062-9
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Sequence 17, Appl
Sequence 7, Appli
Sequence 9, Appli
Sequence 9, Appli
Sequence 9, Appli
Sequence 9, Appli
Sequence 160, App
Sequence 160, App
Sequence 23, Appli
Sequence 18, Appli
Sequence 18, Appli
Sequence 18, Appli
Sequence 18, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Description
     ORGANISM: N/A
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| 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 |
|------------------|-------------------|-------------------|-------------------|-------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------|------------------|------------------|
| 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 |
| 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 |
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| US-08-457-171-26 | US-08-457-798-26 | US-08-427-001C-26 | US-08-231-730A-26 | US-08-932-682-27 | US-08-932-682-24 | US-08-932-682-19 | US-08-932-682-14 | US-08-786-748A-27 | US-08-786-748A-24 | US-08-786-748A-19 | US-08-786-748A-14 | PCT-US95-09339-65 | PCT-US95-09338-65 | US-09-482-611B-65 | US-09-340-154-65 | US-08-801-028-65 | US-08-505-486-65 |
| • | Sequence 26, Appl | • | • | Sequence 27, Appl | • | • | Sequence 14, Appl | • | • | • | • | • | • | • | • | • | • |

ALIGNMENTS

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COMPUTER READABLE FORM:

MEDIUM TYPE: .Floppy disk 1.44M

MEDIUM TYPE: .Floppy disk 1.44M

COMPUTER: IBM PC compatible

COMPUTER: MS-DOS

SOFTWARE: MS-DOS

SOFTWARE: ASCII (DOS) Text

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/436,

FILING DATE: 08-MAY-1995

CLASSIFICATION DATA:

APPLICATION NUMBER: N/A

PILING DATE: N/A

PILING DATE: N/A

PILING DATE: N/A

APTORNEY/AGENT INFORMATION:

APPLICATION NUMBER: 28,664

REGISTRATION NUMBER: 28,664

REGISTRATION NUMBER: 28,664

REGISTRATION NUMBER: 7WK-(
TELECOMMUNICATION: 110-08-1976

TELECATION FOR SEQ ID NO: 17:

SPONITNO'R CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-436-703B-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Patent No. 5919761
GENERAL INFORMATION:
MOLECULE TYPE:
ORIGINAL SOURCE:
                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 38 amino acids
TYPE: amino acid
STRANDEDNESS: N/A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Wakefield, Thomas W.
APPLICANT: Andrews, Philip C.
APPLICANT: Stanley, James C.
TITLE OF INVENTION: HEPARIN AND LOW MOLECULAR
TITLE OF INVENTION: WEIGHT HEPARIN
TITLE OF INVENTION: WEIGHT HEPARIN
TITLE OF INVENTION: WIGHT HEPARIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: Detroit
STATE: Michigan
COUNTRY: United States of America
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 6601 Woodwa
STREET: Suite 1525
                                         TOPOLOGY: N/A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP: 48226
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6601 Woodward Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Floppy disk 1.44Mb, 3.5"
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GENERAL INFORMATION:

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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
SOPTWARE: FastSEQ for Windows Version 3.0
SEQ ID #2 11
LENGTH: 36
TYPE: PRT'
ORGANYTT
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; OTHER INFORMATION: artificial US-09-785-058-12
                                                                                                                                                                                                                                                                                          RESULT 14
US-10-079-075-11
                                                                                                                                                                                                                                                                                                                                                                       밁
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US-09-785-059-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILE REFERENCE: A 34001 / 072396.0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOPTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
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Best Local Similarity
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILE REFERENCE: A33577 / 072396.0217
CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Artifical sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Artifical sequence
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TYPE: PRT
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PPLICANT: Timothy A. Mietzner
ITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
TLE REFERENCE: A 34001 / 072396.0222
TLE REFERENCE: A 34001 / 072396.0228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 48
RGANISM Artificial Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RRVVRRVRRVVRRVVRVVRRVVRRVRRVVRRVVRVVRR 38
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                                                                                                                                                                                                                                                                                                                                                                     VRRVWRRVVRVVRRWVRRVVRRVVRRWVRR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/09785059
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89.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 134; DB 9;
Pred. No. 1.3e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 144; DB 9;
Pred. No. 1.1e-11;
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Search completed: June Job time: 22.3404 secs
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                                                                                                                                                                                           ; OTHER INFORMATION: US-09-785-058-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 15
US-09-785-058-11
                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 11
LENGTH: 36
                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 11, Application No. US20 GENERAL INFORMATION:
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Best Local Similarity 88.9%;
                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A 34001 / 072396.0222
                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Ronald APPLICANT: Timoth
                                                                                                                                                                                                                    TYPE: PRT
ORGANISM: Artifical sequence
FEATURE:
                                                                                                                            32;
                                                               1 VRRVWRRVVRVVRRWVRRVVRRVVRRWVRR 36
                                                                                 7 VRRVVRRVVRVVRRVVRRVVRRVVRRVVRR 42
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                                                                                                                            Conservative
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                                                                                                                                                                                                            Artificial
              9, 2003, 12:34:09
                                                                                                                                           70.5%;
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                                                                                                                            Score 134; DB Pred. No. 1.3e 0; Mismatches
                                                                                                                                                                                                          peptide derived from HIV-1
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Pred. No. 1.3e-10;
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RESULT 8
US-10-079-075-6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; OTHER INFORMATION: Artificial peptide derived from HIV-1
US-10-079-075-6
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US-09-785-059-6
                                                                                                           SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 6
                                                                                                                                                                                                                                                                            Sequence 6, Application US/09785058 Publication No. US20030036627A1 GENERAL INFORMATION:
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Best Local Similarity
Matches 36; Conserv
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SOFTWARE: FASTSEQ for Windows Version
SEQ ID NO 6
LENGTH: 36
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Best Local (
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SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 6
LENGTH: 36
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Publication No. US20020188102A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                         APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DEIVED ANTIMICROBIAL PEPTIDES
FILE REPERENCE: A 34001 / 072396.0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
OTHER INFORMATION: Artificial peptide derived from HIV-109-785-058-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRU 572396.0222
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
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CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                 NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                            APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne
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                                               TYPE: PRT ORGANISM: Artifical sequence
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ORGANISM: Artifical sequence
FEATURE:
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                                        FEATURE:
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                                                                                              LENGTH: 36
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Pred. No. 4.7e-14;
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Pred. No.
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US-10-079-075-12
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US-09-785-059-12
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                                                                                                                                ; OTHER INFORMATION: artificial peptides derived from HIV-1
US-10-079-075-12
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SOFTWARE: FRSTSEQ for Windows Version 3.0
SEQ ID NO 12
LENGTH: 48
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LENGTH: 48
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                                                               Matches
                                                                              Best Local Similarity
                                                                                               Query Match
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Best Local (
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Patent No. US20020169279A1
                                                                                                                                                                                                                                                                              APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION; VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A33577 / 072396.0217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                         TYPE: PRT ORGANISM: Artificial Sequence
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ORGANISM: Artifical sequence
                                                                                                                                                                 FEATURE:
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                              1 RRVVRRVRRVVRRVVRRVVRRVVRRVVRRVVRVVRR 38
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RRWVRRVRRVWRRVVRRWVRRVRRVWRRVVRVVRR
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89.5%;
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89.5%;
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Pred. No.
                                                                             Score 144; DB 9;
Pred. No. 1.1e-11;
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Pred. No. 1.1e-11;
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RESULT 12 US-09-785-058-12 ; Sequence 12, Appl ; Publication No. 1

Application US/09785058 No. US20030036627A1

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Query Match
Best Local Similarity
""" hes 42; Conserve
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US-09-785-059-8
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US-09-785-058-7
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US-10-079-075-7
                                                         ; OTHER INFORMATION: Artificial US-09-785-059-8
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                                                                                                                                                                                       Sequence 8, Application US/09785059
Patent NO. US20020169279A1
GENERAL INFORMATION:
APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A33577 / 072396.0217
CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
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SEQ ID NO 7
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 8
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 Query Match
Best Local Similarity
Matches 42; Conserv
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A 34001 / 072396.0222
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SOFTWARE: FastSEQ for Windows Version 3.0
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CURRENT FILING DATE: 2001-02-16
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ORGANISM: Artificial Sequence
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                                                                                     TYPE: PRT
ORGANISM: Artifical sequence
FEATURE:
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              100.0%;
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100.0%; Pred. No. 2e-17;
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                                                                       peptide derived from HIV-1
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Score 190; DB 9;
Pred. No. 2.4e-17;
); Mismatches 0;
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                                                                       US-09-785-059-6
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Best Local
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Best Local &
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                                                                                                                                                                                                                                                                                   FEATURE:
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; OTHER INFORMATION: Artificial peptide derived from US-10-079-075-8
                                                   Sequence 6, Application US/09785059
Patent No. US20020169279A1
GENERAL INFORMATION:
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LENGTH: 48
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
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SEQ ID NO 8
LENGTH: 48
TYPE: PRT
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TITLE OF INVENTION: VIRUS DETIDED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VITUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
RUMBER OF SEQ ID NOS: 12
APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne:
                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: Artificial peptide derived from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RRVVRRVVRRVVRRVVRRVVRRVVRRVVRRVVRRVVRR
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Pred. No. 2.4e-17
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Pred. No. 2.4e-17;
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Database
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                                                                                                                                                                                                                                                                                                                                                                                                            /cgn2_6/ptodata/1/pubpaa/US07_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/PCTUS_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US09_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US10_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US10_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US10_PUBCOMB.pep:*
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/cgn2_6/ptodata/1/pubpaa/PCT_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep:*
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US-10-079-075-7

US-09-785-058-7

US-09-785-058-8

US-10-079-075-8

US-09-785-059-8

US-09-785-059-6

US-10-079-075-12

US-10-079-075-12

US-10-079-075-11

US-09-785-059-11

US-09-785-059-11

US-09-785-059-11

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US-09-785-059-11

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US-09-785-059-5
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| 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 |
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| 52 | 52 | 52 | 52 | 52 | | 52 | | 52.5 | 53 | 54 | 54 | 54 | 54.5 | 60 | 66 | 66 | 66 | 75 | 75 | 75 | 88 | 88 | 88 | 88 | 88 |
| 27.4 | 27.4 | 27.4 | 27.4 | 27.4 | 27.4 | 27.4 | 27.6 | 27.6 | 27.9 | 28.4 | 28.4 | 28.4 | 28.7 | 31.6 | 34.7 | 34.7 | 34.7 | 39.5 | 39.5 | 39.5 | 46.3 | 46.3 | 46.3 | 46.3 | 46.3 |
| 599 | 391 | 381 | 345 | 345 | 344 | 29 | 2472 | 297 | 96 | 12 | 12 | 12 | 96 | 105 | 32 | 31 | 31 | 28 | 28 | 28 | 31 | 31 | 31 | 24 | 24 |
| _ | 9 | 9 | 10 | 9 | 9 | 9 | 10 | 9 | 9 | 9 | ø | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| US-08-911-824-108 | US-10-059-271-93 | US-09-952-680A-29 | US-09-779-451-8 | US-10-026-741-49 | US-10-040-349B-1 | US-10-060-102-8 | US-09-815-242-5064 | US-09-738-626-6303 | US-10-093-892-9 | US-09-785-058-4 | US-10-079-075-4 | US-09-785-059-4 | US-10-093-892-7 | US-10-093-892-5 | US-09-785-058-3 | US-10-079-075-3 | US-09-785-059-3 | US-09-785-058-1 | US-10-079-075-1 | US-09-785-059-1 | US-09-785-058-2 | US-10-079-075-2 | US-09-785-059-2 | US-09-785-058-10 | US-10-079-075-10 |
| 10 | 93 | 29 | e B | Sequence 49, Appl | ۲ | • | Sequence 5064, Ap | 63 | 9 | 4, | .4 | .4 | 7, | υ ' | | ω | ω , | Sequence 1, Appli | Sequence 1, Appli | 1, | Sequence 2, Appli | ٧, | 2 | • | Sequence 10, Appl |

ALIGNMENTS

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RESULT 1
US-09-785-059-7
; Sequence 7, Application US/09785059
; Patent No. US20020169279A1
                                                                                                                                                                                        RESULT 2
US-10-079-075-7
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                                                                                                                                                                                                                                                                                                                                                                                                                ; ORGANISM: Artifical sequence ; FEATURE: OTHER INFORMATION: Artificial peptide derived from HIV-1 US-09-785-059-7
Sequence 7, Application US/10079075
Publication No. US2020188102A1
GENERAL INFORMATION:
APPLICANT: Ronald C. Montelaxo
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REPERINCE: A34001-A / 072396.0222
CURRENT APPLICATION UNBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 7
LENGTH: 42
TYPE: PRT
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                                                                                                                                                                                                                                                                                                                                                                              Query Match
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396,0217
CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                                                                                                                                                                                              Local
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                                                                                                                                                                                                                                                                                   Similarity
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Pred. No. 2e-17;
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RESULT 14
AAR90748
ID AAR90
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Best Local (
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              peptide fusion proteins in which the ubiquitin polypeptide is linked at its 3'-terminus to the lytic peptide. The lytic peptides are pref. selected from either the cecropins, defensins, sarcotoxins, melittin and magainins. The fusion proteins (FPs) are useful for treating protozoal, bacterial, fungal and viral infections and neoplasia (in plants and animals) in the same way as the FP alone, they also promote wound healing. FPs produced in bacteria may be cleaved in vitro by ubiquitin hydrolases to recover the active lytic peptide. FPs produced in enkaryotic cells are cleaved by endogenous enzymes to yield lytic peptide. Recombinant DNA encoding the FPs have greater stability in bacteria than DNA encoding the lytic peptide.
                                                                                                                                                                                       Lytic peptide; ubiquitin; synthetic analogue; cell membrane; cell lysis; microbial pathogen; disease-resistant plant; bacterial infection; fungus; protozoa; virus; neoplasia; fusion protein; hydrolase.
                         (DEME-) DEMETER
                                                   22-JUL-1994;
                                                                              24-JUL-1995;
                                                                                                                                     WO9603522-A1
                                                                                                                                                                Synthetic
                                                                                                                                                                                                                                               Synthetic lytic peptide #78.
                                                                                                                                                                                                                                                                        17-SEP-1996 (first entry)
                                                                                                                                                                                                                                                                                                                                AAR90748 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 5; Page 19; 112pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             acid,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New fusion protein of ubiquitin and a lytic peptide - for treating infections and neoplasia, heating wounds, etc. also related nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Belknap W, Garbarino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24-JUL-1995;
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                                                                                                                                                                                                                                                                                                                                                                                                KKFVKKVAKVAKKVAKKVAKKVAKKVAK 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              37
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
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                                                    94US-0279472
                                                                               95WO-US09338
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                         BIOTECHNOLOGIES LTD.
                                                                                                                                                                                                                                                                                                                              peptide; 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31.6%; Score 60; DB 1 26.5%; Pred. No. 0.49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       15;
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CC AAR89967-R90021 and AAR90726-R90763 represent synthetic analogues of CC naturally occurring lytic peptides. Lytic peptides destroy prokaryotic CC and other non-host cells by disrupting the cell membrane and promoting CC cell lysis. Synthetic lytic peptide analogues have similar or higher CC levels of lytic activity for many different types of cells, compared to CC naturally occurring forms. The concentration of the synthetic analogue required to lyse microbial pathogens does not lyse normal mammalian CC development of disease-resistant plants. The peptides are useful in CC development of disease-resistant plants. The peptides are useful in CC development of disease-resistant plants. The peptides can also be used for combatting protozoal, fungal, CC lytic peptides can also be used for combatting protozoal, fungal, CC viral or bacterial infections or neoplasias in mammals and plants. CC Lytic peptide-ubiquitin fusion proteins are suitable for production in CC bacterial hosts. Bacteria lack the hydrolase which cleaves the peptide combatting the released in the host cells. The recombinantly produced control to release of the host cells. The recombinantly produced in the host cells.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Lytic peptide(s), useful for developing disease-resistant plants - can be expressed as fusion protein with ubiquitin for stable prodn. in bacterial host cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      in bacterial host
                                                                               lytic peptide can be retrieved from the fusion protein by cleavage in
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                                        Matches
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Best Local 9
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                   1 RRVVRRVRRVVRRVVRRVVRRVVRRVVR 34
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9; Conserva
KKFVKKVAKVAKKVAKKVAKKVAKKVAKVAK 36
                                        Conservative
                                                  31.6%; Score 60; 26.5%; Pred. No.
                                        Mismatches
                                                 0.49;
                                                            DB 17;
                                        10;
                                                            Length 37;
                                        Indels
                                       0;
                                       Gaps
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Sequence

37 AA;

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RESULT 15
AAW39765
ID AAW39
Cytolytic peptide analogues - with methylated lysine residues increase protease resistance
                                                                                                                                                                                                           Lytic peptide; lysine-rich; proteolytic digestion; methylation; try protection; amphipathic alpha-helix; beta-pleated sheet; treatment; infection; viral; bacterial; yeast; fungal; protozoan; cancer.
                                                                                                 24-APR-1995;
18-NOV-1993;
                                                                                                                               24-APR-1995;
                                                                                                                                                                                          Synthetic.
                                                                                                                                                                                                                                                   Synthetic lysine-rich lytic peptide
                                       WPI; 1998-158370/14.
                                                                                                                                                  10-FEB-1998
                                                                                                                                                                      US5717064-A
                                                                                                                                                                                                                                                                                                              AAW39765 standard;
                                                                              (DEME-) DEMETER BIOTECHNOLOGIES
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                                                          Julian
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93US-0148889.
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                                                                                                                                                                                                                                                                                                             peptide;
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RESULT 11
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XX AR74
XX Lyti
DT 11-J;
XX Ineq
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RESULT 12
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AC AAÂ64
XX
DT 24-AU
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New lytic peptide(s) for treating e.g. infections and neoplasias - contain mainly alanine, valine and lysine residues with the lysine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAR74713
                           24-AUG-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 administration.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 8; Page 49; 66pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                neoplasia.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tryptic digestion resistant lytic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11-JAN-1996
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                                                                                                                                 AAR64792 standard;
                                                                          AAK64792;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (DEME-) DEMETER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         methylated;
                                                                                                                                                                                                                                                                  w
                                                                                                                                                                                                                                                                                                                                                                     Similarity 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              pref. methylated
                                                                                                                                                                                                                                                                  KKFVKKVAKVAKKVAKKVAKKVAKKVAKVAK 36
                                                                                                                                                                                                                                                                                                                RRVVRRVRRVVRRVVRRVVRRVVRRVVR 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             37
                                                                                                                                                                                                                                                                                                                                                                     Conservative
                           (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   93US-0148889
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "the epsilon-amino groups of the lysine residues and the alpha-amino group of the N-terminal amino acid are sufficiently methylated to impart enhanced proteolytic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tryptic resistant; immunological; infection;
                                                                                                                              peptide;
                                                                                                                                                                                                                                                                                                                                                                                             31.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              digestion resistance to the peptide"
                                                                                                                                                                                                                                                                                                                                                                     15;
                                                                                                                                                                                                                                                                                                                                                                     Score 60; DB
Pred. No. 0.49
15; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         37
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                                                                                                                                                                                                                                                                                                                                                                                                0.49;
                                                                                                                                                                                                                                                                                                                                                                                                                         DB 16; Length 37;
                                                                                                                                                                                                                                                                                                                                                                     10;
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RESULT 13
AAR92394
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                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                   Query Match
Best Local S
                                   Ubiquitin; stability;
                                                                                                                                                                                                                                                                                                                                                              group of Lys residues or glyoxylation of the side chains of Arg residues, and methylation or glyoxylation of the N-terminal amino acid. The peptides are prepared by standard methods of solid phase synthesis and may be used in the treatment of cystic fibrosis (CF), neoplasia, pneumonia, bronchitis, etc.. The peptides pref. have a lytic activity, thereby lysing pathogenic bacteria, virally infected cells and transformed cells as well as treating the epithelial cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The sequences given in AAR64770-806 and occuring amphipathic peptides which may pulmonary disease states. These peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Amphipathic peptide; pulmonary disease; resistant; bacteria; proteolytic digestion; methylation; glyoxylation; cystic fib CF; neoplasia; pneumonia; bronchitis; lytic activity; lysis.
                                                                                                                                                    AAR92394 standard; peptide;
                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                           pulmonary disease states. These peptides have enhanced resistance to proteolytic digestion due to methylation of the epsilon-amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Treatment of 
by admin. of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Jaynes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        04-JUN-1993;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Amphipathic peptide
                                                                         Lytic peptide used in ubiquitin-lytic peptide
                                                                                                   17-SEP-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1995-036106/05
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                                                                                                                             AAR92394;
                                                                                                                                                                                                                                                                                                                                                     defect of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (DEME-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21; Page 49; 54pp;
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                                                                                                                                                                                                                                                                        Similarity 9; Conserv
                                                                                                                                                                                                                                              RRVVRRVRRVVRRVVRRVVRRVVRRVVRRVVR 34
                                                                                                                                                                                                                       KKFVKKVAKVAKKVAKKVAKKVAKKVAKVAK 36
                                                                                                                                                                                                                                                                                                                                                      transformed cells CF.
                                   fusion protein; lysis; infection; reduced toxicity.
                                                                                                                                                                                                                                                                                                                          37 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Julian GR;
                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    pulmonary disease states such as cystic fibrosis a non-naturally occurring amphipathic peptide
                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        93US-0039620
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "Lys residues are opt. methylated and/or Arg
residues are glyoxylated"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #23,
                                                                                                                                                                                                                                                                                     31.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Opt.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    for treating a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           English.
                                                                                                                                                                                                                                                                        15;
                                                                                                                                                       37
                                                                                                                                                                                                                                                                        Score 60; DB
Pred. No. 0.49
L5; Mismatches
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                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAR76077 represent non-naturally be used for treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     or glyoxylated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     pulmonary
                                                                                                                                                                                                                                                                                                 16;
                                                 neoplasia; wound healing;
                                                                                                                                                                                                                                                                          10;
                                                                         fusion protein
                                                                                                                                                                                                                                                                                                Length 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     disease state.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              fibrosis;
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                                                                                                                                                                                                                                                                                                                                                                               infected
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Synthetic

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microorganisms such as bacteria, fungi, protozoa and DNA and RNA viruses and can be used in tissue culture to inhibit unwanted microbial growth, particularly for the production of recombinant proteins or vectors for gene therapy. They can also be used in preventing infections through the sterilisation of wounds prior to suture and to sterilise surgical instruments. The unique structure of these antimicrobial peptides imparts high potency while selectivity is maintained, they are

the

is an analogue of the peptide LLPI (see ANY32549). The peptides can be used for treating infections caused by Staphylococcus aureus, methicillin resistant S. aureus, Pseudomonas aeruginosa, Enterococcus faecalis, S. marcescens, Escherichia coli, fungi, protozoa and viruses a mammalian host. They can be used to inhibit growth of diverse

protozoa and DNA and RNA viruses

resents an antimicrobial peptide of the invention, the peptide LLP1 (see AAY32549). The peptides can infections caused by Staphylococcus aureus,

and be

This sequence represents an antimicrobial is an analogue of the peptide LLP1 (see A

Disclosure;

Column

21; 62pp; English.

moderately haemolyvic but only lyse red blood cells at high concentrations unlike melittin, a peptide extracted from bee venom, which is highly active against bacteria and lyses red blood cells showing little selectivity. The peptides target a membrane structure which makes it more difficult for a microorganism to develop a mechanism of resistance against this type of antibiotic. Their small size makes them relatively simple to prepare by standard synthetic peptide chemistry.

Matches Query Match Best Local (

l Similarity 12; Conserv

Conservative

8;

Mismatches

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Gaps

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32.6%;

Score 62; DB 2 Pred. No. 0.21;

DB 20;

Length 28 Indels

Sequence

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RESULT 9
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ID AAR8
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AAR84128-73 are amphipathic peptides which are able to stimulate the proliferative growth of fibroblasts and epithelial cells such as keratinocytes, hence enhancing wound healing in mammalian subjects. The peptides concomitantly have antimicrobial efficacy, against
                                                                                                                                                                                                                                                                                                           amphipathic peptide; enhance; fibroblast; keratinocyte; proliferation;
wound healing; defensin; antimicrobial.
                                                           Claim
                                                                              Use of amphipathic peptide(s) keratinocyte proliferation to
                                                                                                                   WPI; 1995-382791/49
                                                                                                                                                                                          20-APR-1994;
                                                                                                                                                                                                                19-APR-1995;
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                                                                                                                                                                                                                                                               WO9528832-A1
                                                                                                                                                                                                                                                                                      Synthetic
                                                                                                                                                                                                                                                                                                                                             Peptide enhancer of fibroblast and keratinocyte proliferation
                                                                                                                                                                                                                                                                                                                                                                      06-JUN-1996
                                                                                                                                                                                                                                                                                                                                                                                               AAR84150
                                                                                                                                                                                                                                                                                                                                                                                                                     AAR84150 standard,
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                                                                                                                                          JM, Julian
                                                                                                                                                                  DEMETER
                                                        Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RVRRVVRRVVRRVVRRVVRRVVRRVV 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RVIRVVQGACRAIRHIPRRIRQGLRRIL 28
                                                                                                                                                                                                                                                                                                                                                                     (first
                                                         49; 64pp; English.
                                                                                                                                                                                          94US-0231730
                                                                                                                                                                                                                95WO-US04718
                                                                                                                                                                  BIOTECHNOLOGIES
                                                                                                                                           g
g
                                                                                                                                                                                                                                                                                                                                                                                                                    Peptide;
                                                                                                                                                                                                                                                                                                                                                                      entry.
                                                                              (s) - for enhancing fibroblast and
to promote wound healing in a mammal
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RESULT 10
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             Query Match
Best Local
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                                                                                                                      AAR77042-R77081 are synthetic, amphipathic, lytic peptide analogues comelittin, cecropin, magainin and defensin peptides. The peptides are between 23 and 39 residues long, are amphipathic, carry an overall positive charge and have anti-neoplastic activity. The peptides are specifically useful for the lysis of cancer cells. Normal mammalian cells are resistant to lysis due to their highly organised cytoskeleton, cancerous cells however posses an inferior and structurally compromised cytoskeleton which when acted upon by lytic peptides will cause cell lysis. This allows the lytic peptides to be used for in vivo treatment of cancers. The peptides are esp. useful for the treatment of female mammalian cancers e.g. breast, ovarian,
                                                                             uterine and cervical cancers. The peptides can however be used to treat most forms of cancer, cystic fibrosis, pneumonia, bronchitis and bronchopulmonary viral and microbial infections.
                                                                                                                                                                                                                                                                                                                         by delivering non-naturally occurring,
proliferative lytic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                microbial species including sepsis and wound infection.
                                                     Sequence
                                                                                                                                                                                                                                                                                                Claim
                                                                                                                                                                                                                                                                                                                                                     Method of combatting mammalian neoplasias and other disease states
                                                                                                                                                                                                                                                                                                                                                                                WPI; 1995-366226/47.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   08-APR-1994;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Anti-cancer; lysis; amphipathic; neoplasia; tumour; cystic fibrosis; bronchopulmonary; viral; virus; analogue; magainin; cecropin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic anti-neoplastic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20-MAY-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAR77064 standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19-0CT-1995
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                                                                                                                                                                                                                                                                                               7; Page 47; 63pp; English.
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9; Conserv
Similarity
9; Conserv
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                                                     37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      37 AA;
                                                                                                                                                                                                                                                                                                                                                                                                            Julian GR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                     A
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             31.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             31.6%;
26:5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 lytic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15;
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             Score
Pred.
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             No.
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                                                                                                                                                                                                                                                                                                                                       non-onco:cytologically
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                          DB 16; Length 37;
             .49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           36
                                                                                                                                                                                                                                                      lytic peptide analogues of eptides. The peptides are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 37
                                                                                                bronchitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
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RESULT 7
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAR80727-R80748 are new amphipathic polypeptides. They have a broad spectrum of antimicrobial and antifungal activity. They can be used to treat or prevent infection in humans and animals or applied to plants as sprays, creams, dust, etc. The DNA encoding these peptides can also be incorporated into susceptible plants via the use of a non-phytotoxic vehicle adapted for systemic administration. This process imparts resistance to plant pathogens esp. fungi (e.g. Fusarium graminareum, F.moliniforme, Aspergillus flavus, Alternaria longipes, Colletotrichum graminicola, Phytophthora megasperme, Sclerotinia sclerotonium). The peptides are esp. useful in transformed plants such as maize, sorghum, wheat, soya, alfalfa, rapesseed, sunflower, tobacco or tomato.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New antimicrobial amphipathic polypeptide(s) and related nucleic acids - for clinical use or esp. to increase resistance of plants
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1; Page 17; 24pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              to fungal pathogens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rao AG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07-JAN-1994;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             broad spectrum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Antimicrobial; antifungal; pathogen; plant; amphipathic;
                                                                                                            Synthetic.
Human immunodeficiency
                                                                                                                                                                                                                                                                     AAW47769 standard; peptide; 28
26-JAN-1996;
24-JAN-1997;
                                    24-JAN-1997;
                                                               03-FEB-1998
                                                                                      US5714577-A.
                                                                                                                                                                                           Antimicrobial peptide LLP1 analogue.
                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                  Antimicrobial;
                                                                                                                                                                                                                      26-MAY-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (PION-) PIONEER HI-BRED INT INC
                                                                                                                                                    microbial; transmembrane protein; TM; les amphipathic; antibacterial; antifungal;
                                                                                                                                                                                                                                                                                                                                                               12 RRVVRVVRRVVRRVVRRVVRRVVRRV 39
                                                                                                                                                                                                                                                                                                                                                                                       l Similarity
12; Conser
                                                                                                                                                                                                                                                                                                                                      \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zhong
                                                                                                                                                                                                                                                                                                                                      RRIYRAIRHIPRRIRGWLRRIGRRIERV
                                                                                                                                                                                                                                                                                                                                                                                                                                          31
                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                     (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94US-0179632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         95WO-US00062
96US-0010634.
97US-0786748.
                                     97US-0786748
                                                                                                                                                                                                                                                                                                                                                                                                    33.7%;
                                                                                                                                                                                                                                                                                                                                                                                   7;
                                                                                                                                                                                                                                                                                                                                                                                       Score 64; DB 16; Pred. No. 0.13; 7; Mismatches !
                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                      28
                                                                                                                                                     lentivirus lytic peptide;
al; antiviral; antiprotozo
                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                 Length 31;
                                                                                                                                                                                                                                                                                                                                                                                          Indels
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                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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RESULT 8
AA332703
ID AA733
XX AA732703
AC AA73
XX AA11
XX BEEN
XX US59
PN US59
PN US59
PN 18-S
XX US59
PN 18-S
XX US59
PN 18-S
XX US59
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to new antimicrobial peptides which correspond to amino acid sequences in the transmembrane proteins of lentiviruses, in particular HIV and SIV. These peptides comprise arginine rich sequences which, when modelled for secondary structure, display high amphipathicity and hydrophobic moment. Also disclosed are structural and functional analogues and homologues of these peptides which also display antimicrobial activity. The peptides are highly inhibitory to microorganisms (bacteria, fungi, viruses and protozoa) but significantly less toxic to red blood cells and other normal mammalian cells. Activity is demonstrated against Gram positive and negative bacteria including Pseudomonas aeruginosa, Staphylococcus aureus, Enterococcus faecalis and secretaria
                                                                                                                                                                                                      26-JAN-1996;
24-JAN-1997;
18-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Antimicrobial peptide; LLP1; SLP-1; LLP2; SLP2A; SLP2B; ELP; infection; growth inhibitor; microorganism; virus; gene therapy; vector production;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present sequence
the new peptides. It
(see AAW47614) which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAY32703;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; Column 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Retroviral
                                                                                                                                                                                                                                                                                                                                                                31-AUG-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sterilisation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Antimicrobial peptide LLP1 analogue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-OCT-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of HIV strain HXB2R.
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                                                   WPI; 1999-508189/42.
                                                                                                      Mietzner TA,
                                                                                                                                                                                                                                                                                                             18-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                   US5945507-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human immunodeficiency virus type 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAY32703 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Serratia marcescens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (UYPI-) UNIV PITTSBURGH
                                                                                                                                                         (- Idan)
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12; Conserv
                                                                                                                                                         VIND
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TM peptides - useful as antibacterial agents
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                         PITTSBURGH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                      Montelaro RC,
                                                                                                                                                                                                      96US-0010634.
97US-0786748.
97US-0932682.
                                                                                                                                                                                                                                                                                                             97US-0932682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  32.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      is one of 169 disclosed specific examples of is an analogue of the peptide designated LLP is a peptide from the transmembrane protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       59pp;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28
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Pred. No. 0.21
8; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tencza SB;
                                                                                                        Tencza
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 19;
0.21;
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0,

Antimicrobial peptides useful for treating microbial infections

SX SX

Sequence

28

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RESULT 4
AAG65539
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            has a detectable membrane disrupting activity against a pathogen, and is useful for inhibiting non-microbial pathogenic activity also. (I) is also useful for killing human sperm. The peptides are also provided in the form of an expression vector comprising a nucleic acid encoding the peptides. The peptides are useful for inhibiting the activity of bacteria, and other microbial pathogens such as algae, fungi or protozoa and for inhibiting non-microbial pathogens such as worms or arthropods, and as spermicides for humans as the sperm membrane is atypical of human cell membranes. (I) also has diagnostic uses e.g., in localizing an infection or detecting sepsis. The peptides may act as binding molecules and are useful to purify a target from blood, for qualitative or quantitative analysis of analytes in in vitro sample, and for in vivo imaging. Also, they are useful as molecular weight markers, as nutrient source, as growth medium component for culturing microorganisms, as well as a food ingredient for human consumption. The peptides have a greater selectivity for bacterial versus mammalian lipids as compared to the alpha helical peptides. Sequences AAG65536-47 represent amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                         having detectable membrane disrupting activity against a microbial pathogen, and substantially no membrane disrupting activity against mammalian cells. (I) is useful for inhibiting microbial activity. (I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel peptides having antimicrobial activity have positive charge to selectively disrupt microbial membranes, assume beta sheet structure membrane environment and are substantially amphipathic in beta sheet
                                                                                                                                                                                                                                                                                                                                                                                                                                    having 8-50 amino acids, a net charge of 4, a hydrophobic moment (microH) as a beta sheet which is 0.2 higher than its micro H as alpha helix, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention provides an antimicrobial compound (I) which is a peptide having 8-50 amino acids, a net charge of 4, a hydrophobic moment (micro)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Antimicrobial; microbial membrane disrupter; gene therapy; pathogen; spermicide; imaging; magainin; PGla.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Peptide sequence used in the course of the invention.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAG65539;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAG65539 standard; peptide; 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 102; Page 84; 119pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2001-565322/63.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (UYOH-) UNIV OHIO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15-FEB-2000; 2000US-0182495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15-FEB-2001; 2001WO-US04822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23-AUG-2001
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12; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LRRLLRLLRLLRRLLRLLRLLRRLLR 27
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  36.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 69; DB 1
Pred. No. 0.03;
3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₽
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
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RESULT 6
AAR80735
ID AAR8
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                                                                                                                                                                     Query Match
Best Local :
                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                      The synthetic ampipathic alpha-helical lytic peptides given in AAR60057-71 were designed to provide antifungal or antimicrobial activity when expressed in monocot or dicot plants. They also heterinary and medical applications.
                                                                                                                                                                                                                                                                                           Synthetic polypeptide(s) and the nucleic acid encoding them exhibits amphipathic alpha-helices and provide cell-expressa antimicrobial activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
        Synthetic antimicrobial/antifungal polypeptide.
                                                AAR80735;
                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Amphipathic peptide; alpha-helix; lytic peptide; antifungal; antimicrobial; fungus resistance; disease resistance;
                            28-FEB-1996 (first entry)
                                                                   AAR80735 standard; peptide; 31
                                                                                                                                                                                                                                                                        Disclosure; Page 19; 25pp; English.
                                                                                                                                                                                                                                                                                                                                    WPI; 1994-249137/30.
                                                                                                                                                                                                                                                                                                                                                        Rao AG,
                                                                                                                                                                                                                                                                                                                                                                                                                   12-JAN-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                      21-JUL-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16-FEB-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAR60065;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAR60065 standard; peptide; 31 AA.
                                                                                                                                                                                                                                                                                                                                                                                               13-JAN-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO9415961-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               crop protection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Antimicrobial peptide
                                                                                                                                                                                                                                                                                                                                                                            (PION-) PIONEER HI-BRED INT INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                        12 RRVVRVVRRVVRRVVRRVVRRVVRRV 39
                                                                                                                     \vdash
                                                                                                                                                            12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           l Similarity
8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9 RVVRRVVRVVRRVVRRV
                                                                                                                                                                    Similarity
                                                                                                                    RRIYRAIRHIPRRIRGWLRRIGRRIERV 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |::||::|::||::||:
RIIRRIIRIIRRIIRRI
                                                                                                                                                                                                    31 AA;
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                                                                                                                                                            Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                               93US-0003884
                                                                                                                                                                                                                                                                                                                                                                                                                   94WO-US00383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      35.3%;
                                                                                                                                                                     33.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25
                                                                                                                                                            7;
                                                                                                                                                           Score 64; DB
Pred. No. 0.13
7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 67;
Pred. No.
                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                  provide cell-expressable
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 22;
                                                                                                                                                                                DB 15;
                                                                                                                                                                      .13;
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                                                                                                                                                                                Length 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
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RESULT 2
AAW06684
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Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present peptide corresponds to a generic formula for a cationic oligopeptide; the formula is (b-1-1-b)n, where b is a hydrophobic amino acid, 1 is a hydrophilic amino acid and n is at least 4. In this case, where b is Leu, 1 is Arg and n = 10, the oligopeptide forms an alphahelix which forms a stable complex with a nucleic acid. The complex is suitable for transferring nucleic acid, esp. in gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                Coagulation; anticoagulant; heparin; platelet aggregation; cell adhesion; positively charged cluster; arginine; polycationic; decrease; n-protamine; salmine protamine; protamine sulphate; salmon sperm.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Complex of nucleic acid and oligopeptide with sectransfer vectors contg. them, useful for efficient nucleic acid to cells in gene therapy.
                                                                                                                                                                                                                                                         Modified-site
                                                                                                                                                                                                                                                                             Binding-site
                                                                                                                                                                                                                                                                                                                                                                           Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                               Protamine-like peptide analogue [+18RGD]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAW06684 standard; peptide; 39 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 6; Page 16; 20pp; French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1995-276981/37
                                                                                                                                                 08-MAY-1995;
                                                                                                                                                                         08-MAY-1996;
                                                                                                                                                                                                14-NOV-1996
                                                                                                                                                                                                                       WO9635444-A1
                                                                                                                                                                                                                                                                                                                  Region
                      Claim
                                          protamine
                                                                              WPI; 1997-011697/01.
                                                                                                                                                                                                                                                                                                                                         Modified-site
                                                                                                     Andrews
                                                                                                                           (UNMI ) UNIV MICHIGAN
                   31; Page 31; 42pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7
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ne but has
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                                                                                                    Stanley JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA,
                                                                                                                                                 95US-0436703
                                                                                                                                                                          96WO-US06567.
                                                                                                                                                                                                                                                                                 /note=
34..36
                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                             'note= "amidated"
                                                                                                                                                                                                                                                                  'label= cell_adhesion_motif
                                                                                                                                                                                                                                                                                                       label=
                                                                                                                                                                                                                                                                                                                             note= "acetylated"
                                         the anticoagulant effects of heparin - is based fewer positive charges for reduced toxicity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     46.2%;
                                                                                                                                                                                                                                                                                          repeat_region
"4 tandem repe
                                                                                                     Wakefield TW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 76.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                         repeats of (Arg) 2 (Ala) 2 (Arg) 2Ala motif"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5.5; DB 10
5. 0.0053;
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transfer of
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Protamine

sulphate (also called n-protamine or salmine protamine)

18

levels

Amino acid sequence of Shiva-4 as an exemplary lytic peptide for use as an antimicrobial peptide contemplated for use in plant (trichophyte) transformants in the invention. It is a homologue of Shivas-2, -3 and -5 to -7. All of these Shiva peptides are also contemplated as having general utility in inducing lysis of cells in vitro. Shiva-4 may be too lytically active to be used in plants at high

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CC a polycationic peptide derived from salmon sperm and is used to CC reverse hepaxin anticoagulation. One of the major components of CC salmine protamine is a 32 amino acid peptide having a total cationic CC charge of [+21], with arginine accounting for 67% of the total sequence CC and for all of the positive charge. Peptides of 20-40 amino acids with CC total cationic charge less than [+21] and which are able, at least CC partially, to reverse the effect of heparin and/or low molecular weight CC partially, to reverse the effect of heparin and/or low molecular weight CC protamine analogues of n-protamine where the positive charge on the CC amino acid sequence is reduced by selective replacement of positively charged arginine residues with an uncharged residue, so that total CC cationic charge is less than [+21]. The new peptides are used in vivo CC to reverse the effects of heparin; they have the same anti-heparin CC activity as protamine but are less toxic (because of the reduced CC number of positive charges) and are relatively easy and inexpensive to prepare. The present sequence represents a specifically claimed CC includes an RGD fibronectin receptor ligand motif. Peptide also CC improved the reversal of anti-Pactor Xa activity of the low molecular CC weight heparin Enoxaparin to 72%, compared to only 30% reversal by CC count than n. Also, peptide [+18RGD] produced less decrease in platelet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                              Shiva-4; lytic peptide; antimicrobial peptide; disease-resistant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                        Transformed plants contg. I agent, or polypeptide high
                                                                                                                                                                                                                                       Jaynes JM,
                                                                                                                                                                                                                                                                                                    02-NOV-1987;
                                                                                                                                                                                                                                                                                                                                    02-NOV-1988;
                                                                                                                                                                                                                                                                                                                                                                                                WO8904371-A.
                                                                                                                                                                                                                                                                                                                                                                                                                              trichophyte;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           19-MAR-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAP91336;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAP91336 standard;
                                                                                                                           Table I; ; 56pp; English
                                                                                                                                                                                                        WPI; 1989-165650/22
                                                                                                                                                                                                                                                                                                                                                                 18-MAY-1989
                                                                                                                                                                                                                                                                     (LOUU ) LOUISIANA STATE UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  l Similarity
17; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 RRVVRRVRRVVRRVVRRVVRRVVRRVVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RRAARRARRARR----ARRAARRARRARRARR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sequence of Shiva-4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 39 AA;
                                                                                                                                                                                                                                       Derrick KS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                              Shiva-2; Shiva-3; Shiva-5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                    87US-0115941.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   36.8%;
                                                                                                                                                          heterolgous gene - expressing
h in essential amino acids
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                                                                                                                                                                                                                                                                                                                                                                                                                                Shiva-6; Shiva-7
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Listing first 45 summaries
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Maximum DB seq length: 2000000000
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Perfect score:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Searched
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gapop 10.0 , Gapext 0.5
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Copyright (c) 1993 - 2003 Compugen Ltd
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/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1992.DAT:
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123.607 Million cell updates/sec
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Pred. No. is the number of results predicted by chance to I score greater than or equal to the score of the result being and is derived by analysis of the total score distribution to have a being printed,

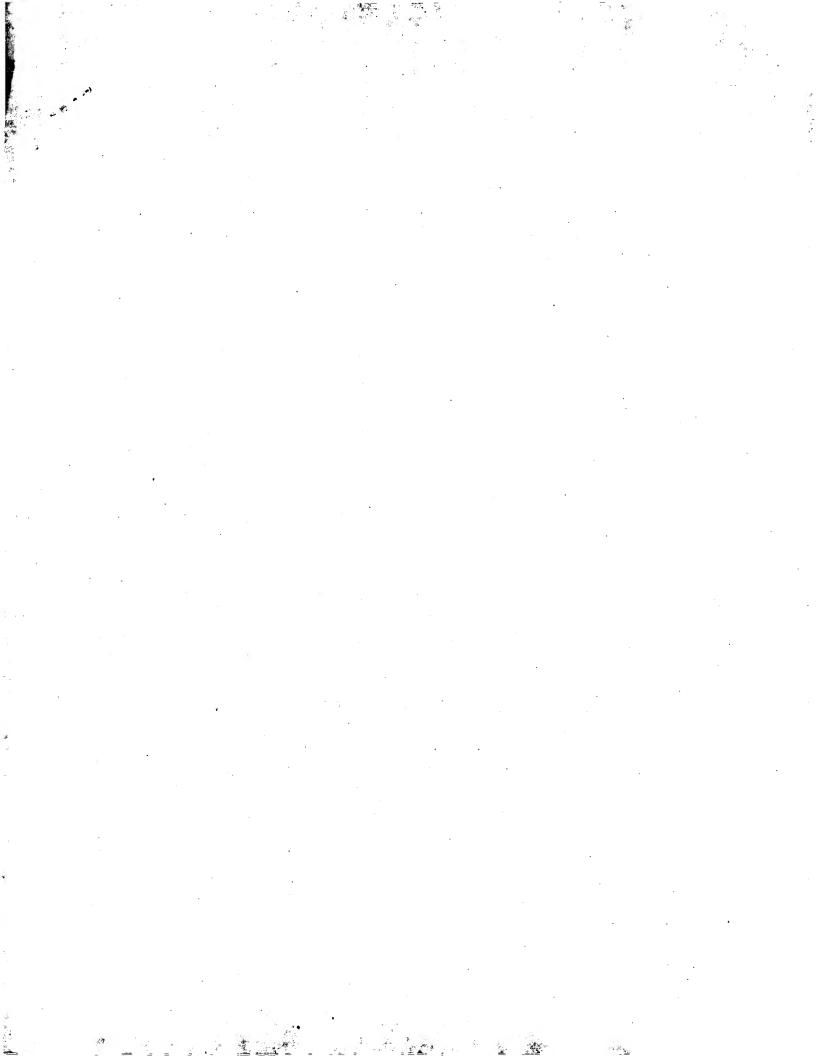
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|---------------|-------|-------------------------------|---------|----|----------|--------------------|
| 1 | 76.5 | 40.3 | 40 | 16 | AAR84926 | Alpha-helix-formin |
| N | 70 | 36.8 | 39 | 18 | AAW06684 | Protamine-like pep |
| w | 69 | 36.3 | 28 | 10 | AAP91336 | Amino acid sequenc |
| 4. | 67 | 35.3 | 18 | 22 | AAG65539 | Peptide sequence u |
| ري دي | 64 | 33.7 | 31 | 15 | AAR60065 | Antimicrobial pept |
| 0 | 64 | 33.7 | 31. | 16 | AAR80735 | Synthetic antimicr |
| 7 | 62 | . 32.6 | 28 | 19 | AAW47769 | Antimicrobial pept |
| 8 | 62 | 32.6 | 28 | 20 | AAY32703 | Antimicrobial pept |
| 9 | 60 | 31.6 | 37 | 16 | AAR84150 | Peptide enhancer o |
| 10 | 60 | 31.6 | 37 | 16 | AAR77064 | Synthetic anti-neo |
| | | | | | | |

| | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 |
|--------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|----------|--------------------|--------------------|------------|--------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------|
| 57 | 57 | 57 | . 57 | 57 | 57 | 57 | 57 | 57 | . 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 58 | 58 | 58 | 59 | 59.5 | 9 | 60 | 60 | 60 | 60 | 60 | 60 |
| 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.5 | 30.5 | 30.5 | 30.5 | 30.5 | 30.5 | 31.1 | 31.3 | 31.3 | 31.6 | 31.6 | 31.6 | 31.6 | 31.6 | 31.6 |
| 37 | 37 | 37 | ω | ω G | ω ω | 33 | 33 | ω ω | 33 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 27 | 27 | 412 | 217 | 165 | 28 | 28 | 17 | 704 | 761 | 743 | 105 | 37 | 37 | 37 | 37 | 37 |
| 16 | 16 | 16 | 19 | 17 | 17 | 16 | 16 | 16 | 16 | 20 | ა 0 | 20 | 20 | 19 | 19 | 19 | 19 | 17 | 17 | 드 | 22 | 20 | 20 | 19 | 17 | 11 | 20 | 21 | 18 | 19 | 17 | 17 | 16 | 16 |
| AAR64798 | AAR74719 | AAR77070 | AAW39768 | AAR90751 | AAR92397 | AAR64795 | AAR74716 | AAR77067 | AAR84153 | AAY32572 | AAY32569 | AAY32564 | AAY32559 | AAW47636 | AAW47633 | AAW47628 | AAW47623 | AAR89993 | AAR92436 | AAR05095 | ABB66985 | AAY04933 | AAY32563 | AAW47627 | AAW05116 | AAR05096 . | AAW99084 | AAB11535 | AAW25792 | AAW39765 | AAR90748 | AAR92394 · | AAR64792 | AAR74713 |
| Amphipathic peptid | Tryptic digestion | Synthetic anti-neo | Synthetic lysine-r | Synthetic lytic pe | Lytic peptide used | Amphipathic peptid | Tryptic digestion | Synthetic anti-neo | Peptide enhancer o | Antimicrobial pept | Synthetic lytic pe | Lytic peptide used | Synthetic HIV-1 tr | Drosophila melanog | Mycobacterium spec | | Antimicrobial pept | Porcine somatotrop | 2.PEP HIV | Non-B, non-C, non- | SEN virus protein | Leishmania major S | Synthetic lysine-r | Synthetic lytic pe | Lytic peptide used | Amphipathic peptid | Tryptic digestion |

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RESULT 1
AAR64926
ID AAR6
XX AAR64926
AC AAR6
XX AAPD
XX AAPD
XX AAPD
XX AAPD
XX DNA
XX DNA
XX DNA
XX PT Regd
FT Regd

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Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alpha-helix; secondary structure; nucleic acid transfer; cationic; DNA binding peptide; gene therapy; encapsulation.
                                           Bazile D,
                                                                                                                                                                                                              08-FEB-1994;
                                                                                                                                                                                                                                                                                                  08-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                     11-AUG-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alpha-helix-forming oligopeptide (LRRL)10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18-MAR-1996 (first entry)
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                                                                                                                               (RHON ) RHONE POULENC RORER SA
                                       Emile C,
                                                                                                                                                                                                              94FR-0001381.
                                                                                                                                                                                                                                                                                                  94FR-0001381.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "repeat unit; must have at least 4 repeats,
    pref. 10-50"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /label= LKKL
                                           Helene C,
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RESULT 14
Q91D00
ID Q91D0
AC Q91D0
DT 01-DE
DT 01-DE
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DE ORF1.
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Q9TVI8
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Best Local S
Matches 12
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Best Local S
Matches 12
               Q91D00;
Q91D00;
01-DEC-2001
01-DEC-2001
01-JUN-2002
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Q9TVI8;
01-MAY-2000
                                                                                                                                                                                                                                                                                                                                          STRAIN=FRIEDLIN;

MEDLINE=97237563; PubMed=9084041;

Moll T., Desponds C., Jacquet R., Belli S., Fasel N.J.;

"T. Woll, C. Desponds, R. Jacquet, S. Belli and N. J. Fasel.

H1 expression varies during Leishmania majordevelopment.";

Mol. Biochem. Parasitol: 84:215-227(1997).

EMBL; AJ223861; CAA11591.1; -.

EMBL; AJ223861; CAA11591.1; -.

EMBL; AJ223860; CAA11591.1; -.

EMBL; AJ223861 CAA11591.1; -.
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SEQUENCE FROM N.A.
STRAIN=LV39;
MEDLINE=94187808; PubMed=8119626;
Fasel N.J., Robyr D.C., Mauel J., Gla
"Identification of a histone H1-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Identification of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Leishmania major.
Eukaryota; Euglenozoa;
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STRAIN=FRIEDLIN;
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12; Conservative
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e H1-like gene ex
             Created)
Last sequence update)
Last annotation updat
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Pred. No.
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3; Mismatches
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Search completed: June Job time: 39.5745 secs

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RESULT 15

Q90CG
AC Q90CG
AC Q90CG
AC Q90CG
DT 01-DE
DT 01-JU
DE Envel
GN ENV
OS Human
OC Virus
OX NCBI-
RN [1]
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Matches 11
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Best Local S
Matches 21
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EMBL; AF377959; AAK59217.1; -.
InterPro; IPR000328; Env GP41.
InterPro; IPR000777; GP120.
Pfam; PF00516; GP120; 1.
Pfam; PF00517; GP41; 1.
ALDS; Coat protein; Glycoproteir
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Q90CG7;
01-DEC-2001
01-DEC-2001
01-JUN-2002
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Virology 288:358-368(2001).
EMBL; AB060593; BaB69904.1; -.
InterPro; IPR004219; TTvirus_Unk.
Pfam; PF02956; TT_ORF1; 1.
Pfam; PF02956; TT_ORF1; 1.
SEQUENCE 755 AA; 89785 MW; 3ABC076D93F1F8FA CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=21342588; PubMed=11448170;
Carr J.K., Torimiro J.N., Wolfe N.D., Eite
Sanders-Buell E., Jagodzinski L.L., Gotte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Viruses; Retroid
NCBI_TaxID=11676;
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MEDLINE=21488921; PubMed=11601907;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human immunodeficiency virus
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862 AA;
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Retroviridae; Lentivirus.
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Last sequence update)
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Burke D.S.,
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S
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DNA Res. 7:331-338 (2000).
EMBL; AP003010; BAB53093.1; -.
Hypothetical protein; Complete proteome.
SEQUENCE 349 AA; 37473 MW; B7E34ECECCC39304 CRC64;
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"Complete genome structure of the nitrogen-fixing symbioti
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MEDLINE=21488921; PubMed=17601907;
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TT virus.
Viruses; ssDNA viruses;
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01-DEC-2001
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STRAIN=MAFF303099;
MEDLINE=21082930; PubMed=11214968;
                  Methanopyrus kandleri.
Archaea; Euryarchaeota
Methanopyrus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
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Watanabe A., Idesawa K., Ishikawa.A., Kawashima
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NCE 759 AA; 89860
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Q25305;
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Q91PS3;
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TT virus.
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SEQUENCE FROM N.A.
STRAIN=AV19 / DSM 6324 / JCM 9639;
MEDLINE=21927647; PubMed=11930014;
Leishmania major.
Eukaryota; Euglenozoa;
NCBI_TaxID=5664;
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Pfam; PF02956; TT_ORF1; 1.
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"Molecular epidemiology of TT virus ('
"Molecular epidemiology of TT virus ('
novel TTV genotypes in Indonesia.",
Arch. Virol. 146:1249-1266 (2001).
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SEQUENCE FROM N.A. Van Etten J.L.;
Submitted (DEC-1995
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"Novel variants related to TT virus wide distribution i Submitted (JAN-2001) to the EMBL/GenBank/DDBJ databases EMBL; AF345521; AAK11696.1; -.
InterPro; IPR004219; TTvirus_Unk.
Pfam; PF02956; TT_ORF1; 1.
Pfam; PF02956; TT_ORF1; 1.
SEQUENCE 760 AA; 90494 MW; 50BD115CCF55181A CRC64;
                                                                                                                                            SEQUENCE FROM N.A.
MEDLINE=20478054; PubMed=11021991;
Sun L., Graves M.V.,
Sun L., Graves M.V.,
"Characterization of a beta-1,3-glucanase enco
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MEDLINE=96187795; PubMed=8614977;

Lu Z., Li Y., Que Q., Kutish G.F., F

"Analysis of 94 kb of the chlorella

positions 88 to 182.";
                                                                                                                           PBCV-1.
                                                                                                                                                                                                                                                                                           MEDLINE=20013326; PubMed=10544099;
Kaiser A., Vollmert M., Tholl D., Graves M.V.,
Lisec A.D., Nickerson K.W., Van Etten J.L.;
"Chlorella virus PBCV-1 encodes a functional ho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-NOV-1996
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Viruses; ssDNA viruses;
VIRI_TaxID=68887;
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                       EMBL/GenBank/DDBJ
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a virus PBCV-1 330-kb
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SEQUENCE
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SEQUENCE FROM N.A.
Van Etten
                                Rhizobium
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Submitted (MAR-1995) to the EMBL/GenBank/DDBJ
     Bacteria;
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Q9SHX2;
01-MAY-2000 (TrEMBLrel. 1
01-MAY-2000 (TrEMBLrel. 1
01-JUN-2002 (TrEMBLrel. 2
SEQUENCE FROM N.A.
STRAIN=CV. COLUMBIA;
MEDLINE=20083487; Pub
Lin X., Kaul S., Roun
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01-DEC-2001
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01-DEC-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gottlieb P., Wei H., Toporovsky I.;
"Nucleotide sequence of the middle dsRNA segment of Phi-12.";
Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AY039807; AAK74123.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
STRAIN=WBR-1;
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Reddy P.S., Chen Y., Idamakanti N.,
"Characterization of early region 1
Virology 253:299-308(1999).
                                                                                        NCBI
                                                                                                                        Arabidopsis thaliana (Mouse-ear cress).
Eukaryota; Viridiplantae; Streptophyta; Embryc
Spermatophyta; Magnoliophyta, eudicotyledons;
eurosids II; Brassicales; Brassicaceae; Arabic
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Viruses; dsRNA viruses;
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    Rounsley
                                                                                                                                                                                                                       Birel. 13, Last sequence update)
Birel. 21, Last annotation update)
(Hypothetical 41.9 kDa protein).
  PubMed=10617197;
Rounsley S.D., Shea
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    T.P.,
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JERAIN=CV. COLUMBIA,

RA Lin X., Kaul S., Shea T.P., Fujii C.Y., Shen M., VanAken .

RA Barnstead M.E., Mason T.M., Bowman C.L., Ronning C.M., Ber

RA Carrera A.J., Creasy T.H., Buell C.R., Town C.D., Nierman

RA Fraser C.M., Venter J.C.;

RL Submitted (FEB-2002) to the EMBL/GenBank/DDBJ databases.

DR EMBL; AC007235; AAD26890.1; -

DR EMBL; AC007235; AAD26890.1; -

WHYPOthetical protein.

WHYPOthetical protein.
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Q9FZT7;
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                                                                                                                                                                             containing three dsRNA genomic Virology 275:218-224(2000). EMBL; AF261667; AAG00439.1; -.
                                                                                                                                                                                                                 MEDLINE=20473938; PubMed=11017801; Qiao X., Qiao J., Onodera S., Mindich L.; "Characterization of phil3, a bacteriophage containing three dsRNA genomic segments.";
                                                                                                                                                                                                                                                                                                                                                             MEDLINE=99350412; PubMed=10419946; Mindich L., Qiao X., Qiao J., Onodera S. Hoogstraten D.; "Isolation of additional bacteriophages double-stranded RNA.";
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01-OCT-2001
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OM protein - protein search, using sw model
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Maximum DB seq length: 200000000
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1: sp_archea:*
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3: sp_fungi:*
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      June 9, 2003, 11:43:01; Search time 38.5745 Seconds (without alignments) 224.345 Million cell updates/sec
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Gapop 10.0 , Gapext 0.5
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sp_plant:*
sp_rodent:*
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sp_unclassified:*
sp_rvirus:*
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sp_archeap:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

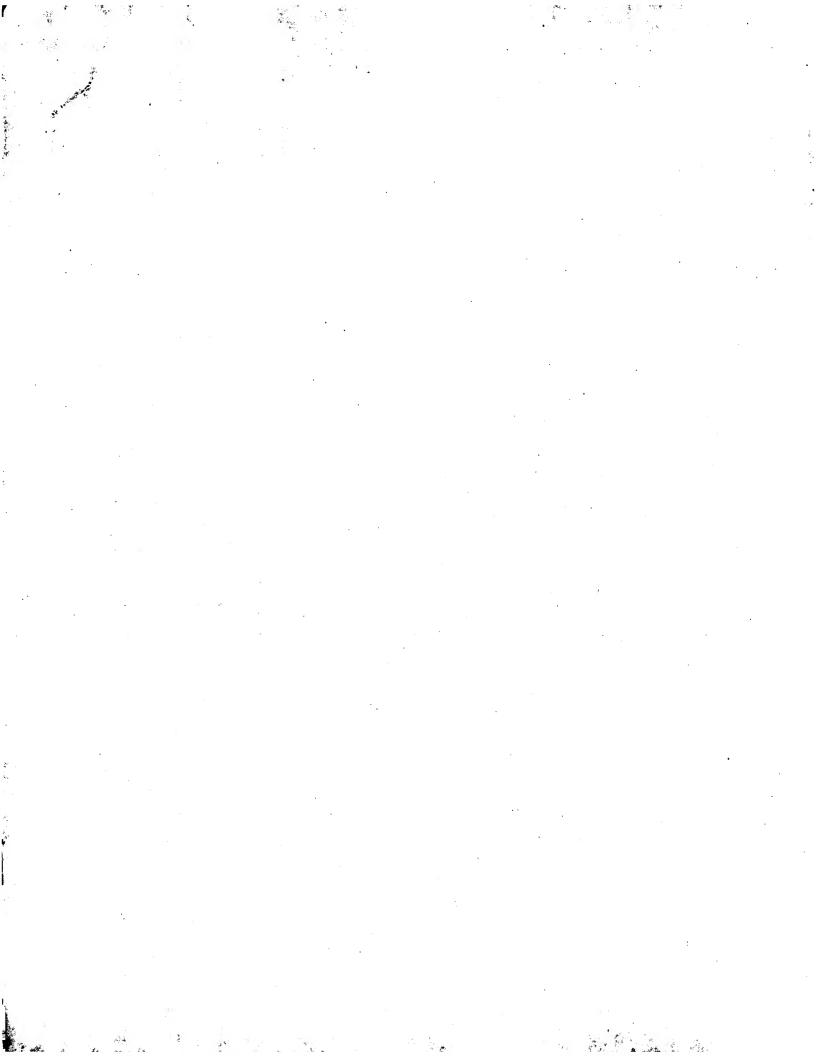
SUMMARIES

| H | 7 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | σ | v | 4 | ω | N | _ | Result No. |
|--------------------|-------------|--------------------|--------------------|-------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------|--------------------|----------------------|--------------------|--------------------|--------------------|--------------------------|
| 0,0 | л О Л | 60 | 60 | 60 | 60 | 63 | 63 | 63.5 | 64 | 64 | 64 | 67.5 | 70 | 71.5 | 76 | 76.5 | Score |
| | | 31.6 | 31.6 | 31.6 | 31.6 | 33.2 | 33.2 | 33.4 | 33.7 | 33.7 | 33.7 | 35.5 | 36.8 | 37.6 | 40.0 | 40.3 | Query |
| 100 | 2 | 862 | 755 | 105 | 105 | 742 | 428 | 759 | 349 | 302 | 114 | 760 | 230 | 349 | 242 | .171 | Query Match Length DB |
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| COLVED | D T Y T D | Q90CG7 | Q91D00 | 8IVT6D | Q25305 | Q91PS3 | Q8TXS5 | Q91CZ2 | Q987V7 | Q25562 | Q84529 | Q99AR5 | Q9FZT7 | Q9SHX2 | Q94ML3 | 071097 | ID |
| Gorxas mermanopyin | | Q90cg7 human immun | Q91d00 tt virus. o | Q9tvi8 leishmania | Q25305 leishmania | Q91ps3 tt virus. o | Q8txs5 methanopyru | Q91cz2 tt virus. o | Q987v7 rhizobium l | Q25562 naegleria g | Q84529 paramecium | Q99ar5 tt virus. o | Q9fzt7 pseudomonas . | Q9shx2 arabidopsis | Q94ml3 bacteriopha | 071097 bovine aden | Description |

| 45 | 44 | 43 | 42 | 41 | 40 | 39 | 3 8 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 |
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| 115 | 198 | 838 | 746 | 745 | 745 | 138 | 74 | 739 | 651 | 69 | 874 | 874 | 869 | 855 | 842 | 738 | 650 | 619 | 217 | 94 | 85 | 723 | 100 | 100 | 100 | 263 | 761 | 513 |
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| BD6M6Ö | Q994I4 | Q8UTC7 | Q9JH31 | Q99AQ0 | Q9JG78 | Q9RD30 | Q9ZKI2 | Q8V7I7 | Q39720 | Q8V7F2 | 997ID8Ö | 897D8 | Q8UL69 | Q8UL67 | Q9QM83 | Q8V7H2 | Q39721 | Q95S18 | Q9VGX3 | Q8V7D3 | Q9ZIY4 | Q9DUC4 | 000913 | 000912 | Q9GRP6 | Q9LN00 | 88TW60 | Q9R2U5 |
| Q9w9g8 human herpe | Q994i4 human immun | human | tt | H | | Q9rd30 streptomyce | Q9zki2 helicobacte | | | Q8v7f2 tt virus. o | Q8ul66 human immun | human | Q8u169 human immun | | Q9qm83 human immun | | | Q. | | Q8v7d3 tt virus. o | Q9ziy4 borrelia bu | Q9duc4 tt virus. o | O00913 leishmania | O00912 leishmania | μ, | Q9ln00 arabidopsis | tt virus. | Q9r2u5 streptomyce |

ALIGNMENTS

| O71097 PRELIMINARY; PRT; 171 AA. O71097, O71097 PRELIMINARY; PRT; 171 AA. O71097, O71097 O1-AUG-1998 (TYEMBLIFEL O7, Last sequence update) O1-JUN-2002 (TYEMBLIFEL O7, Last sequence update) PVII. Bovine adenovirus type 3 (Mastadenovirus bos3). Viruses; dsDNA viruses, no RNA stage; Adenoviridae; Mastadenovirus SEQUENCE FROM N.A. STRAIN-WBR-1; Reddy P.S., Idamakanti N., Zakhartchouk A.N., Baxi M.K., Lee J.B., Pyne C., Babiuk L.A., Tikoo S.K.; "Nuclectide sequence, genome organization, and transcription map o bovine adenovirus type 3."; J. Virol. 72:1394-1402(1998). SEQUENCE FROM N.A. STRAIN-WBR-1; MEDLINE-98318755; PubMed-9654686; Babiuk L.A., Tikoo S.K.; "Characterization of bovine adenovirus type 3 early region 2B."; Virus Genes 16:313-316(1998). SEQUENCE FROM N.A. STRAIN-WBR-1; MEDLINE-98451815; PubMed-9778793; Lee J.B., Baxi M.K., Idamakanti N., Reddy P.S., Zakhartchouk A.N., FYNE C., Babiuk L.A., Tikoo S.K.; "Genes 16:313-316(1998). SEQUENCE FROM N.A. STRAIN-WBR-1; MEDLINE-98451815; PubMed-9778793; Lee J.B., Baxi M.K., Idamakanti N., Reddy P.S., Zakhartchouk A.N., Virus Genes 17:99-100(1998). SEQUENCE FROM N.A. STRAIN-WBR-1; "Genetic organization and DNA sequence of early region 4 of bovine adenovirus type 3."; Virus Genes 17:99-100(1998). | RA RATION | 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 | RELEASE SECTION | RESULT O71097 ID O71097 O7 |
|---|--|---|--|---|
| MINARY; PRT; 171 AA. Birel. 07, Created) Birel. 07, Last sequence update) type 3 (Mastadenovirus bos3). ruses, no RNA stage; Adenoviridae; PubMed=9445040; kanti N., Zakhartchouk A.N., Baxi N.A., Tikoo S.K.; nee, genome organization, and transtype 3." pubMed=9654686; PubMed=9654686; Ps., Zakhartchouk A.N., Idamakanti S.K.; of bovine adenovirus type 3 early of bovine adenovirus type 3 early of bovine A.N., Reddy P.S., Zaki A., Tikoo S.K.; PubMed=9778793; K., Idamakanti N., Reddy P.S., Zaki A., Tikoo S.K.; PubMed=9778793; rikoo S.K.; PubMed=9778793; rikoo S.K.; Tikoo S.K.; 100 (1998). | MEDLINE-9845 Lee J.B., Ba Pyne C., Bab "Genetic org adenovirus t Virus Genes [4] SEQUENCE FRC | SEQUENCE FRC SEQUENCE FRC STRAIN=WBR-1 MEDLINE=9831 Baxi M.K., R Babiuk L.A., "Characteriz Virus Genes [3] SEQUENCE FRC | SEQUENCE FRC SEQUENCE FRC STRAIN=WBR-1 MEDLINE=9810 MEDLINE=9810 Reddy P.S., Pyne C., Bab Pyne C., Bab "Nucleotide bovine adeno | TT 1 97 071097 071097; 01-AUG-1998 01-AUG-1998 01-JUN-2002 PVII. Bovine adenc Viruses; dsD NCBI_TaxID=1 |
| PRT; 171 AA. Freated) ast sequence update) ast annotation update) ttadenovirus bos3). A stage; Adenoviridae; khartchouk A.N., Baxi N organization, and trans organization, and trans tchouk A.N., Idamakanti tchouk A.N., Zakh tch.N., Reddy P.S., Zakh .K.; 793; sequence of early regi | PubA K.,] Lion Lion | M N.A. 8755; PubMed=96: Eddy P.S., Zakh Tikoo S.K.; ation of bovine 16:313-316(1998) | M N.A. 5785; PubMed=94; Idamakanti N., iuk L.A., Tikoo sequence, genom virus type 3."; :1394-1402(1998) | MINARY; BLrel. BLrel. BLrel. type 3 |
| AA. update) on update) bos3). noviridae; noviridae; Idamakanti pe 3 early pe 3 early regi | 5 | 54686; artchouk A. adenovirus | 45040; Zakhartchou S.K.; e organizat | PRT; 1 Created) Last seque Last annot astadenovir |
| | ddy P.S., Zakhartchouk of early region 4 of | Idamakanti N., Pyne pe 3 early region 2B | A.N., Baxi M.K., Lee on, and transcription m | |



Search completed: June 9, 2003, 11:56:38 Job time: 8.48936 secs

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RESULT 14
HSP2_GORGO
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HSP2_HC
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HSP2 HOI
P15342;
                                             MEDLING DI Retief J.D., Di
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MEDLINE=89171259;
                                                                                                                      Gorilla gorilla gorilla (Lowland gorilla).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae.
                                                                                                                                                                                  HSP2_GORGO STANDARD; PRT; 102 AA
P35313; Q9N1A9;
01-FEB-1994 (Rel. 28, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                          Chromosomal protein; Nucleosome core; Testis; DNA condensation; Nuclear pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pirhonen A., Linnala-Kankkunen A., Maenpaa P.K.; "Comparison of partial amino acid sequences of two protamine variants from stallion sperm. Structural evidence that the va
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    stallion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pirhonen A., Maenpaa P.K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                 PIR; S02786; S02786.
PIR; S10754; S10754.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     are products of different genes."; FEBS Lett. 244:199-202(1989).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Crania
Mammalia; Eutheria; Perissodactyla;
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15-JUN-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9796;
MEDLINE=94109373; PubMed=8281927;
                                                                        MEDLINE=93292525;
                                                                                     SEQUENCE
                                                                                                         NCBI_TaxID=9595;
                                                                                                                                                                      Sperm histone
                                                                                                                                                                                                                                                                                                                                                             Local
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TISSUE SPECIFICITY: TESTIS.
SIMILARITY: BELONGS TO THE PROTAMINE P2 FAMILY.
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                                  J.D., Dixon G.H.; fon of pro-protamine P2 genes Biochem. 214:609-615(1993).
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Biophys. Acta
                                                                                  FROM N.A.
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(Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                28.2%;
ilarity 53.8%;
Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Linnala-Kankkunen A., Maenpaa P.K.,
                                                                                                                                                                                                                                                                                                                                                                                                 AΑ;
                                                                                                                                                                      precursor
                                                                        PubMed=8513810;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PubMed=2924903;
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15, Last seq
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15EABC109F2AD6B1 CRC64;
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                                                                                                                                                                                    update)
                                              primates.";
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RESULT 15
HSP2_PANPA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a celebrate the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     - I- FUNCTION: PROTAMINES SUBSTITUTE FOR HISTONES IN THE CHRC
SPERM DURING THE HAPLOID PHASE OF SPERMATOGENESIS. THEY
SPERM DNA 1170 A HIGHLY CONDENSED, STABLE AND INACTIVE C
-I- SUBCELLULAR LOCATION: Nuclear.
-I- TISSUE SPECIFICITY: TESTIS.
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Eur. J. B
                                                                                                                                                                                                                 MEDLINE=93292525; PubMed=8513810;
Retief J.D., Dixon G.H.;
"Evolution of pro-protamine P2 genes
Eur. J. Biochem. 214:609-615(1993).
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Chromosomal protein; Nucleosome core; Sper
Testis; DNA condensation; Nuclear protein.
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                                                                                                                                                      MEDLINE=94109373; PubMed=8281927;
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                                                                                                                                                                                                                                                                                                                                                                        Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                         Pan paniscus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tities requires a license agreement (S send an email to license@isb-sib.ch).
. J. Biochem. 218:1095-1095(1993).
FUNCTION: PROTAMINES SUBSTITUTE FOR HISTONES IN THE CHROMATIN SPERM DURING THE HAPLOID PHASE OF SPERMATCHENESIS. THEY COMPACE SPERM DUA INTO A HIGHLY CONDENSED, STABLE AND INACTIVE COMPLEX SUBCELLULAR LOCATION: NUCLEAR.
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J., Wang W., Wu C.-I.;
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21-JUL-1986
15-DEC-1998
Protamine Z
                                                                                                       SPECIES-C.pailasii;

MEDLINE-71157437; PubMed-5551645;

Iwai K., Nakahara C., Ando T.;

"Studies on protamines XV. The complete amino acid sequence of the Z component of clupeine. Application of N leads to O acyl rearrangement and selective hydrolysis in sequence determination.";

J. Biochem. 69:493-509(1971).
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21-JUL-1986 (Rel. 01, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
Protamine Z (Clupeine Z).
Clupea pallasii (Pacific herring), and
Clupea pallasii (Pacific herring).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Clupeomorpha; Clupeidae;
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Chang W.J., Nukushina
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MEDLINE=92126280; PubMed=1772633;
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are products of different genes.";
FEBS Lett. 244:199-202(1989).
-i- FUNCTION: PROTAMINES SUBSTITUTE FOR HISTONES IN THE CHRC-i-- FUNCTION: PROTAMINES SUBSTITUTE FOR HISTONESIS. THEY
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P15343;
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                                                                                                                                                                            SPERM DURING THE HAPLOID PHASE OF SPERM DNA INTO A HIGHLY CONDENSED,
-!- SUBCELLULAR LOCATION: NUCLEAR.
-!- TISSUE SPECIFICITY: TESTIS.
-!- SIMILARITY: BELONGS TO THE PROTAMI
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PIR; A37576; CLHRZA.
PDB; 7INS; 31-JAN-94.
Chromosomal protein; Nucleosome
Testis; DNA condensation; Nucleosome
SEQUENCE 31 AA; 4165 MW; 092
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"Structure of porcine insulin cocrystallized with clupeine Z.";
Acta Crystallogr. B 47:975-986 (1991).
Acta Crystallogr. B 47:975-986 (1991).
-i- FUNCTION: PROTAMINES SUBSTITUTE FOR HISTONES IN THE CHROMATIN OF
SPERM DURING THE HAPLOID PHASE OF SPERMATOGENESIS. THEY COMPACT
SPERM DNA INTO A HIGHLY CONDENSED, STABLE AND INACTIVE COMPLEX.
-i- SUBCELLULAR LOCATION: Nuclear.
-i- TISSUE SPECIFICITY: TESTIS.
-i- MISCELLANEOUS: CLUPEINE Z IS PROBABLY THE RESULT OF A CROSSOVER
BETWEEN THE GENES FOR CLUPEINES YI AND YII.
                                                                                                                                                                                                                                                                                       Pirhonen A., Linnala-Kankkunen A., Maenpaa E
"Comparison of partial amino acid sequences
variants from stallion sperm. Structural evi
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Mammalia; Eutheria; Perissodactyla;
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15-JUN-2002
                                                                                                            SEQUENCE
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MEDLINE=89171259; PubMed=2924903;
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Pirhonen A., Valtonen P., Linnala-Kankkunen
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Biophys. Acta 1039:177-180(1990).
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Pred. No. 0.67
0; Mismatches
                                                                                                            clear protein.
8D31F36098A73179
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RRHRRVCRRVRRR
                                                                                                                                                                                                                                                                                                                     Maenpaa P.K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Equidae; Equus
                                                                                                                                    Spermatogenesis; DNA-binding;
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variants
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RESULT 9
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ID SSS1_S
AC P13275
AC 01-JAN
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PRT1_CLUPA
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Best Local S
Matches 11
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Best Local S
Matches 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SPECIES-C.harengus;
Chang W.J., Nukushina M., Ishii S., Nakahara C., Ando T.;
Submitted (AUG-1970) to the PIR data bank.
-I- FUNCTION: PROTAMINES SUBSTITUTE FOR HISTONES IN THE CHROMATIN SPERM DURING THE HAPLOID PHASE OF SPERMATOGENESIS. THEY COMPAC SPERM DNA INTO A HIGHLY CONDENSED, STABLE AND INACTIVE COMPLEX SUBCELLULAR LOCATION: Nuclear.
-I- TISSUE SPECIFICITY: TESTIS.
                                                                                                                                                  01-JAN-1990
01-JAN-1990
01-JAN-1990
                                                                                                                                                                                                  SSS1_SCYCA
P13275;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SPECIES-C.pallasii;
MEDLINE-73223106; PubMed-4664740;
Suzuki K., Ando T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Clupea paliabil (Atlantic herring) Clupea harengus (Atlantic herring) Eukaryota; Metazoa; Chordata; Craniata; Eukaryota; Metazoa; Neopterygii; Teleostei;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence up
15-DEC-1998 (Rel. 37, Last annotation
Protamine YII (Clupeine YII).
Clupea pallasii (Pacific herring), and
                                                                                                                                                                                                                                                                                                                                                                                                                                       Chromosomal protein; Nucleosome core; Spermatogenesis; DNA-binding; Testis; DNA condensation; Nuclear protein.
SEQUENCE 30 AA; 4049 MW; 7F9BBB80F3ADA566 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Suzuki K., Ando T.;
"Studies on protamines. XVI. The complete clupeine YII.";
                                                              Scyliorhinus canicula (Spotted dogfish) (Spotted catshark).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Chondrichthyes;
Elasmobranchii; Galeomorphii; Galeoidea; Carcharhiniformes;
Ecyliorhinidae; Scyliorhinus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PIR; A02677; CLHRY2.
PIR; A37575; CLHR2A.
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                                                                                                                                   Spermatid-specific
MEDLINE=88055030; PubMed=3678229;
                    SEQUENCE
                                                NCBI_TaxID=7830;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Biochem.
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RIIRRMVRDIRERGRTLESVIEQYTKVVR
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(Rel.
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                                                                                                                                                                                                                                                                                                                                                                    Score 55.5; DB Pred. No. 0.38; 0; Mismatches
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No. 2.3;
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Best Local S
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15-JUL-1999
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SAMBCCCCCCRATA
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Eur. J. Biochem. 169:105-111(1987).
-I- FUNCTION: INVOLVED IN NUCLEAR BASIC PROTEIN:
ARE REPLACED BY SPERMATID SPECIFIC PROTEINS:
REPLACED BY ROTUMINES IN LATE SPERMATIDS.
-I- SUBCELLULAR LOCATION: Nuclear.
-I- SUBCELLULAR INTH PROTEIN S2.
                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content modified and this statement is not removed. Usage by antentities requires a license agreement (See http://www.isb-sor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Crowl R., Ganguly K., Gordon M., Conroy R., Sthaw G.M., Wong-Staal F., Reddy E.P., "HTLV-III env gene products synthesized in E. antibodies present in the sera of AIDS patient Cell 41:979-986 (1985).
                                                                                                                                                                                                                                                                                                    EMBL; M14100; AAA4467;
HIV; M14100; ENV$HXB3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human immunodeficiency virus type 1 (HXE Viruses; Retroid viruses; Retroviridae; NCBI_TaxID=11707;
                                                                                                                                                                                                                                                                   InterPro; IPR000328; Env GP41. InterPro; IPR000777; GP120.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
MEDLINE=85228248; PubMed=2988795;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PIR; S00180; S00180.
Chromosomal protein; Nucleosome core; Spermatogenesis;
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                                                                                                                                                                                                                                                                                                                       M14100; AAA44679.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         987 (Rel. 05, Created)
996 (Rel. 33, Last sequence update)
996 (Rel. 38, Last annotation update)
999 (Rel. 38, Last annotation update)
polyprotein GP160 precursor [Contains: Exterior membrane
polyprotein (GP120); Transmembrane glycoprotein (GP41)].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RRYGRRMRKT--RCRRKGRRISRRPRHTTYRRRVRKIVHLKRR
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EXTERIOR MEMBRANE GLYCOPROTEIN.
BY SIMILARITY.
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Pred.
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No. 1
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dae; Lentivirus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sautiere P., Chevaillier ng sperm differentiation.
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Best Local S
Matches 21
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Best Local S
Matches 19
                                                                                                                                                                                                                                                       01-AUG-1988
01-AUG-1988
16-OCT-2001
                                                                                                                                Mugil cephalus (Flathead mullet) (Mugil japonicus).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Mugilomorpha; Mugilidae;
                                                                                                                                                                                                                                                                                                                            PRTB_MU
P08130;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                             01-AUG-1988 (Rel. 08, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Protamine M6/M7 (Mugiline beta)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             between the Swiss Institute of Bioinforthe European Bioinformatics Institute use by non-profit institutions as lomodified and this statement is not remomentally.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rusvai M., Harrach B., Banrevi A., Evans P., Benko M.; Submitted (OCT-1996) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bovine adenovirus type 2
Viruses; dsDNA viruses, n
TISSUE=Sperm;
MEDLINE=87279969; PubMed=3301825;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Core protein; Late protein. PROPEP 1 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR004912; Adeno
Pfam; PF03228; Adeno_VII; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; U44123; AAB16756.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        entities requires a license
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Ev
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
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                                                  EQUENCE
                                                                                          ICBI_TaxID=48193;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RRVRRVVRRVVRRVVRRV---RRVVRRVVRVVRRVVRR 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .183 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein
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(Rel. 40, Last annotation update)
protein precursor (Protein VII) (pVII).
                                                                                                                                                                                                                                                                                                  (Rel. 08, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
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                                                                                                                                                                                                                                                                                                                                               STANDARD;
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24
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30.0%;
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Pred. No. 1.5;
1; Mismatches 1
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CLEAVAGE (BY ADENOVIRUS PROTEASE)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BY SIMILARITY
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D694365A500D68B8 CRC64;
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URK_BACHD
                      TIGREAMS; TIGREO235; udk; 1.
Transferase; Kinase; ATP-binding;
12 19 ATP
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VARIANT
VARIANT
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STRAIN=C-125 / JCM
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15-JUN-2002 (Rel. 41, Last an
Uridine kinase (EC 2.7.1.48)
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                                                                                                                       PRINTS; PR00478; PHRIBLKINASE. PRINTS; PR00988; URIDINKINASE.
                                                                                                                                                                                                                                                                        EMBL; AP001511; BAB04994.1; -.
                                                                                                                                                                                                                                                                                                                                          or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                         entities requires a license agreement
                                                                                                                                                                                                                                                                                                                                                                                                   use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Takami H., Nakasone K., Takaki Y.,
Fuji F., Hirama C., Nakamura Y., O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=20512582; PubMed=11058132;
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15-JUN-2002
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-!- TISSUE SPECIFICITY: TESTIS.
-!- MISCELLANEOUS: THE SEQUENCE OF
                                                                                                                                                                                                                                               InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      - !- SIMILARITY: BELONGS TO THE URIDINE KINASE FAMILY.
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                                                                                                                                                                                                               InterPro;
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A26762; B26762.

B26762; B26762.

MUCLEOSOME CORE; Spermatogenesis; DNA-binding; mucleomal protein, Nuclear protein.

S = - Q (IN M7 COMPONENT).

IANT 6 7 7 M.

CRC64;
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                                                                                                                                                                                      PF00485;
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      211 AA;
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                                  (POTENTIAL).
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use by non-profit institutions as long as its content
modified and this statement is not removed. Usage by an
entities requires a license agreement (See http://www.isb-
or send an email to license@isb-sib.ch).
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Q89532;
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between the Swiss Institute of Bioinformatics and the EMBL
the European Bioinformatics Institute. There are no restrict
                                                                                                                                                                                                                                                                                                                                      PVII.
Human adenovirus type ---
AsDNA viruses,
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-i- TISSUE SPECIFICITY: TESTIS.
-i- SIMILARITY: BELONGS TO THE PROTAMINE P2 FAMILY.
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                                           Pieniazek N.J., Slemenda S.B., Pieniazek D., Luftig R.B.; Submitted (FEB-1992) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                             MEDLINE=94087748; PubMed=8263936;
Davison A.J., Telford E.A., Watson M.S., M
"The DNA sequence of adenovirus type 40.";
J. Mol. Biol. 234:1308-1316(1993).
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Chromosomal protein; Nucleosome core; Spermatogenesis;
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SWIGS-PROT entry
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hem. 218:1095-1095(1993)
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                                                                                        Pfam; PF00841; protamine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=94109373; PubMed=8281927;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=93292525; PubMed=8513810;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pan troglodytes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro;
                                                                                                                                                                                                                                                                                                                                                                              PUNCTION: PROTAMINES SUBSTITUTE FOR HISTONES IN THE CHROMATIN O SPERM DURING THE HAPLOID PHASE OF SPERMATOGENESIS. THEY COMPACT SPERM DNA INTO A HIGHLY CONDENSED, STABLE AND INACTIVE COMPLEX. SUBCCELLULAR LOCATION: Nuclear.
TISSUE SPECIFICITY: TESTIS.
SIMILARITY: BELONGS TO THE PROTAMINE P2 FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             M86665,

2Pro; IPRO0451,

A; PF03228; Adeno V1.

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24 185

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                                                                                                                                  ; X72968; CAA51474.1;
S33331; S33331.
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                                                                                                           IPR000492; Protamine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          185 AA;
                                         protein; Nucleosome core; condensation; Nuclear pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (Rel. 28, Created)
(Rel. 28, Last sequence up)
(Rel. 41, Last annotation
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
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Primates;
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Pred. No.
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MAJOR CORE PROTEIN.
CLEAVAGE (BY ADENOVIRUS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
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                                                                   Spermatogenesis;
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                                                                 DNA-binding;
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                                                                                                                                                                                                                                                                                                               EMBL outstation
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GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

June 9, 2003, 11:40:31; Search time 8.48936 Seconds (without alignments) 205.199 Million cell updates/sec

Title: Perfect score: US-10-079-075-7 190

Sequence:

Scoring table: , BLOSUM62 Gapop 10.0 , Gapext 0.5

Total number of hits satisfying chosen parameters: 112892

112892 seqs, 41476328 residues

Searched:

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

SwissProt_40:*

Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| 33 | 3 2 | υ | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 80 | 7 | თ | _U | 4 | ω | 2 | Ļ | No. | Result |
|----------------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------|--------------------|--------------------|-------------------|------------|--------------------|------------------|------------|--------------------|------------|--------------------|------------|------------|------------|------------|--------------------|-----------|--------------------|------------|-----------|------------|--------------|------------|------------|-----------------|------------|-------------|--------|
| 01.5 | 200 | 5 2 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52.5 | 52.5 | 52.5 | 53 | 53.5 | 53.5 | 53.5 | 53.5 | 53.5 | 53.5 | 54 | 55.5 | 55.5 | | 56 | 57 | 57.5 | 60 | 60 | 60.5 | Score | |
| 21.1 | . 1 | 27.4 | 27.4 | 27.4 | 27.4 | 27.4 | 27.4 | 27.4 | 27.4 | 27.4 | 27.4 | 27.4 | 27.6 | 27.6 | 27.6 | .7 | 8 | 8 | 28.2 | œ | œ | 8 | 8 | 29.2 | ۰ | ७. | ७. | 0 | 30.3 | Ë | 31.6 | 31.8 | Match I | Query |
| 3 | 198 | 856 | 856 | 856 | 856 | 853 | 380 | 378 | 378 | 304 | 101 | 99 | 305 | 105 | 102 | 70 | 346 | 102 | 102 | 62 | 58 | 31 | 856 | 87 | 30 | 211 | S. | 183 | 102 | 185 | 100 | 193 | Length I | |
| - | ٠, | . ш | ٢ | _ | Н | 1 | _ | _ | μ | ۲ | _ | ۲ | _ | μ | ר | μ | μ. | 1 | ב | μ | _ | - | 1 | μ | μ | _ | 1 | ,_ | ۲ | | ۳ | _ | BB | |
| PRITORYLA | ENV_HVIBR | ENV_HV1PV | ENV_HV1LW | ENV_HV1H2 | ENV_HV1B1 | ENV HV1MF | GB12_HUMAN | GB12_RAT | GB12_MOUSE | NADA_METTH | H1L6 ENSMI | VHSB_BPT7 | Y4CG_RHISN | RL31 AERPE | HSP2 HUMAN | L2MU_ADEB2 | RUVB_BRUME | HSP2_PANPA | HSP2_GORGO | HSP2_HORSE | HSP3_HORSE | PRT2 CLUPA | ENV HV1H3 | | PRTI_CLUPA | URK BACHD | PRTB MUGCE | | HSP2 PANTR | VCO7_ADE40 | HSP2 ALOSE | VCO7_ADE04 | ID | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ! ! ! | |
| Q91185 oryzias | numan | human | human | human | 5 human | | Q03113 homo sapien | Q63210 rattus norv | P27600 mus musculu | 027855 methanobac | | P03751 bacteriopha | P55389 rhizobium | | P04554 homo sapien | | Q8yiv5 brucella me | | | equus | | P02336 clupea pall | | P13275 scyliorhinu | | bacil | mugil | | pan tr | human | P35312 alouatta | Þ | Description | |
| Lat | - 23 | immun | immun | immun | immun | immun | apien | norv | sculu | bact | ninor | iopha | | d who | ipíen | aden | la me | niscu | 1 gor | abal | cabal | pall | rmmun | chinu | pall | ıs ha | cepha | aden . |)glod | adeno | ta se | adeno | | |

| 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 |
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| 50 | 50.5 | 50.5 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51.5 | 51.5 |
| 26.3 | 26.6 | 26.6 | 26.8 | 26.8 | 26.8 | 26.8 | 26.8 | 26.8 | 26.8 | 27.1 | 27.1 |
| 78 | 103 | 102 | 856 | 847 | 846 | 526 | 211 | 102 | 47 | 34 | ω 4 |
| - | ب | _ | μ | ۲ | _ | ب | _ | <u>, , , , , , , , , , , , , , , , , , , </u> | ب | ۲ | ۲ |
| PRT1_SEPOF | HSP2 MACNE | HSP2 MACMU | ENV_HV1W1 | ENV_HV1W2 | ENV HV1ND | EX7L_RHIME | URK BACSU | HSP2_PONPY | HSP1_CAVPO | PRT_PERFV | PRT2_THUTH |
| P80001 | P35298 | P35297 | P31872 | P05880 | P18799 | Q92sr7 | 032033 | P35301 | P35304 | P29629 | P02322 |
| sepia offic | macaca neme | macaca mula | human immun | human immun | human immun | rhizobium m | bacillus su | pongo pygma | cavia porce | perca flave | thunnus thy |

ALIGNMENTS

| RESULT HSP2_A ID _H AC P AC P DT 0 DT 0 DT 1 DT 1 DT S GN P OS A | Que Bes Mat Qy | | 388888888 | | 2888 | | .07 _07 |
|--|--|---|---|---|---|---|---|
| ULT 2 2 ALOSE -HSP2_ALOSE STANDARD; PRT; 100 AA. P35312; 01-FEB-1994 (Rel. 28, Created) 01-FEB-1994 (Rel. 28, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation update) Sperm histone P2 precursor (Protamine P2). PRM2. Alouatta seniculus (Howler monkey). Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; | Query Match 31.8%; Score 60.5; DB 1; Length 193; Best Local Similarity 40.4%; Pred. No. 0.63; Matches 19; Conservative 6; Mismatches 13; Indels 9; Gaps 3 1 RRVVRRVRRVVRRVVRVVRRVVRRVVRR-VVRVVR | MBL; U70921; AAC83411.1; nterPro; IPR004912; Adeno_VII. fam; PF03228; Adeno_VII; 1. BY SIMILARIT ROPEP 41 193 HAIN 25 MAJOR CORE P ITE 24 25 CLEAVAGE (BY ITE 24 25 (POTENTIAL). EQUENCE 193 AA; 21358 MW; 43137E07DB | his SWISS-PROT entry is copyright. It is produced through etween the Swiss Institute of Bioinformatics and the E he European Bioinformatics Institute. There are no rest se by non-profit institutions as long as its content odified and this statement is not removed. Usage by an notities requires a license agreement (See http://www.isb-rsend an email to license@isb-sib.ch). | SEQUENCE FROM N.A. STRAIN=RI-6; Tarassishin L., Szawlowski P.W.S., McLay J., Russell W.C.; Submitted (OCT-1996) to the EMBL/GenBank/DDBJ databases. | Human adenovirus type 4. Human adenovirus type 4. Viruses; dsDNA viruses, no RNA stage; Adenoviridae; Mastadenovirus. NCBI TaxID=28280; [1] — | 01-NOV-1997 (Rel. 35, Created) 01-NOV-1997 (Rel. 35, Last sequence update) 16-OCT-2001 (Rel. 40, Last annotation update) Major core protein precursor (Protein VII) (pVII). | ULT 1 7 ADE04 VCO7 ADE04 STANDARD; PRT; 193 AA. |

C; Keywords: DNA binding;

nucleus

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N;Alternate names: clupeine (Species: Clupea pallasi (Pacific herring) (Species: Clupea pallasi, Clupea pallasi (Pacific herring) (C;Species: 12-Aug-1981 #sequence_revision 12-Aug-1981 #text_change 16-Feb-1997 (C;Accession: A38052; A02677 (C;Accession: Studies on protamines: XVI. The complete amino acid sequence of clupeine YII. A;Title: Studies on protamines: XVI. The complete amino acid sequence of clupeine YII. A;Reference number: A38052; MUID:73223106; PMID:4664740
protamine YII - Atlantic herring
N;Altergate names: clupeine
C;Species: Clupea harengus, Clupea harengus (Atlantic herring)
C;Date: 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change 16-Feb-1997
C;Accession: A37575, A02877
                                                                                                             RESULT 15
CLHR2A
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A;Title: Complete genome sequence of the alkaliphilic bacterium Bacillus halodurans and A;Reference number: A83650; MUID:20512582; PMID:11058132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        uridine kinase udk [imported] - Bacillus halodurans (strain C-125)
C;Species: Bacillus halodurans
C;Date: 01-Dec-2000 #sequence_revision 01-Dec-2000 #text_change 15-Jun-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cross-references: GB:AP001511; GB:BA000004; NID:g10173727; PIDN:BAB04994.1; GSPDB:GN0(;Experimental source: strain C-125
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Conservative .
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Pred. No. 2.6;
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Pred. No. 14;
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R;Chang, W.J.; Nukushina, M.; Ishii, S.; Nakahara, C.; Ando, T
submitted to the Atlas, August 1970
A;Reference number: A37575
A;Accession: A37575
A;Molecule type: protein
A;Residues: 1-30 <CHA>
C;Keywords: chromosomal protein; DNA binding; spermatogenesis
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                        S
                                                      Best Loc
Matches
                                                                                   Query Match
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                                                        19;
2 RRRTRRASRPVRR---RRPRRVSRR-----RRARRR
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llarity 54.3%;
Conservative
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Pred. No. 2.7;
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R;Okamoto, Y.; Muta, E.; Ota, S.
J. Biochem. 101, 1017-1024, 1987
A;Title: Primary structures of M6 and M7 of A;Reference number: A91909; MUID:87279969; P. A;Accession: B26762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R.Marrs, J.A.; Bouck, G.B.

J. Cell Biol. 118, 1465-1475, 1992

A;Title: The two major membrane skeletal proteins (articulins) of Euglena gracilis (A;Reference number: A43417; MUID:92394973; PMID:1522117

A;Accession: A43417

A;Status: preliminary; not compared with conceptual translation

A;Molecule type: nucleic acid

A;Residues: 1-145,'T',147-187,'T',189-348,'T',350-651 <MAR>
A;Note: sequence extracted from NCBI backbone (NCBIP:113032)
 hypothetical protein jhp0953 - C;Species: Helicobacter pylori A;Variety: strain J99 C;Date: 12-Feb-1999 #sequence_1
                                                                                                                                                                                                                                                                                                                                                                                                                   protamine (mugiline beta) M7 - Formosan gray mullet C;Species: Mugil japonicus (Formosan gray mullet) C;Date: 05-Jun-1988 #sequence_revision 05-Jun-1988 C;Accession: B26762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cytoskeletal protein -
C;Species: Euglena grac
C;Date: 20-Feb-1995 #se
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S24609
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                                                                    B71866
                                                                                    RESULT 10
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A; Accession: S24609
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                                                                                                                                    RQTSRPIRRRRRRRRARRAPIRRRRVVRR 31
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Pred. No. 2;
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Pred. No. 26;
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 12-Feb-1999
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                                                pylori (strain
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#text_change 08-Oct-1999
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R;Okamoto, Y.; Muta, E.; Ota, S.
J. Biochem. 101, 1017-1024, 1987
A;Title: Primary structures of M6 and M7 of mugiline beta-(Mugil japonicus)
A;Reference number: A91909; MUID:87279969; PMID:3301825
A;Recession: A26762
                                                                                                                                                                                                                             RESULT 12
A26762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C;Date: 21-Jan-2000 #sequence_revision 21-Jan-2000 #text_change 21-Jul-2000 C;Accession: T43950; T44057 C;Accession: T43950; T44057 C;Risegawa, Y.; Mukai, T.; Nakano, K.; Kagawa, M.; Chen, J.; Mori, Y.; Sunagawa, T.; Kaw. J.; Virol. 73, 8053-8063, 1999 A;Title: Comparison of the complete DNA sequences of human herpesvirus 6 variants A and A;Reference number: Z22732; MUID:99412319; PMID:10482554
A; Molecule type: protein A; Residues: 1-33 < OKA> C; Superfamily: protamine
                                                                                                                                                                 C;Species: Mugil japonicus (Formosan gray mullet)
C;Date: 05-Jun-1988 #sequence_revision 05-Jun-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Residues: 1-115 <1SE>
A;Cross-references: EMBL:AB021506; NID:g4995977; PIDN:BAA78211.1; PID:g4995978
A;Experimental source: strain HST; pop. variant B
A;Accession: T44057
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                                                                                                                                                 C; Accession: A26762
                                                                                                                                                                                                          protamine (mugiline beta) M6 - Formosan gray mullet
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A; Residues: 1-115 < I
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A; Residues: 1-74 < ARN>
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Pred.
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Q.; Taylor, D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 74
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Vovis,
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RESULT 4
T42050
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C;Species -
                                R;Theologis, A.; Ecker, J.R.; Palm, Chin, C.W.; Chung, M.K.; Conn, L.; ansen, N.F.; Hughes, B.; Huizar, L. Nature 408, 816-820, 2000
                                                                                                protein T6D22.16 [imported] - Arabidopsis thaliana C;Species: Arabidopsis thaliana (mouse-ear cress) C;Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 C;Accession: E86215
                                                                                                                                                                          RESULT 5
E86215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R;Cullum, J.

submitted to the EMBL Data
A;Reference number: Z22041
A;Accession: T42050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     probable transposase - Streptomyces coelicolor
C;Species: Streptomyces coelicolor
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 03-Dec-1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: DNA
A; Residues: 1-100 < RET>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eur. J. Biochem. 214, 609-615, 1993
A;Title: Evolution of pro-protamine P2 genes in primates
A;Reference number: S33331; MUID:93292525; PMID:8513810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Species: Alouatta seniculus (red howler monkey)
C;Date: 08-Dec-1993 #sequence_revision 26-May-1995.#text_change
A;Authors: Hunter, J.L.; Jenkins, J.; C.A.; Li, J.H.; Li, Y.; Lin, X.; Liu,
                                                                                                                                                                                                                                                                          S
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: DNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cross-references: EMBL:X71335; NID:g296713; PIDN:CAA50475.1; PID:g296714; Note: the authors did not translate the codon for residue 1
                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                  ;Residues: 1-513 <CUL>
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                                                                                                                                                                                                                                          RRVVVRVR--VRRLVCPTRGCRHTFREQLPGVLERYQRRTARLTRQIKAVVKELAGR 125
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; Pred. No. 2.6;
1; Mismatches
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Pred. No. 13;
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                                                                    C.J.; Pederspiel, N.A.; Kaul, S.; White, O.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dew
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     August 1999
                                                                                                                                                                                                                                                                                                            Mismatches
 Johnson-Hopson, C.; Khan, S.; S.X.; Liu, Z.A.; Luros, J.S.;
                                                                                                                       02-Mar-2001
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 Khaykin, E.;
Maiti, R.; M
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RESULT 7
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S24610
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J. Cell Biol. 118, 1465-1475, 1992
A;Title: The two major membrane skeletal proteins (articulins)
A;Reference number: A43417; MUID:92394973; PMID:1522117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rizzo, M.; Rooney, T.; Rowley, D.; Sakano, H.
A;Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sker, M.; Wu, D.; Yu, G.; Fraser, C.M.; Venter, J.C.; Davis, R.W.
A;Title: Sequence and analysis of chromosome 1 of the plant Arabidopsis.
A;Reference number: A86141; MUID:21016719; PMID:11130712
                                                                                                                                                                                                                                              Eur. J. Biochem. 214, 609-615, 1993
A;Title: Evolution of pro-protamine P2 genes in primates.
A;Reference number: $33331; MUID:93292525; PMID:8513810
                                                                                                                                                                                                                                                                                                                          protamine P2 - chimpanzee
C;Species: Pan troglodytes (chimpanzee)
C;Date: 08-Dec_1993 #sequence_revision 26-May-1995 #text_change 23-Jul-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              major membrane cytoskeletal protein articulin, 86K - Euglena gracilis
C;Species: Euglena gracilis
C;Date: 20-Feb-1995 #sequence_revision 20-Feb-1995 #text_change 09-Sep-1997
                                                                  C; Superfamily: (C; Keywords: DNA)
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A; Residues: 1-263 <STO>
                                                                                                   A; Introns:
                                                                                                                                          A; Note:
                                                                                                                                                           A;Cross-references:
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A; Residues: 1-102 < RET>
                                                                                                                                                                                                           A;Status: preliminary
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A; Residues: 1-650 < MAR>
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                Best Local
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                                                                                                                                      -references: EMBL:X72968; NID:g296074; Pithe authors did not translate the codon
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17; Conserv
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                                                                sperm histone
binding; nuc
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43.6%;
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            30.3%;
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34.8%; Pred.
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Pred. No.
              Score 57.5;
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 Mismatches
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                               Length 102;
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Database
                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 s
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Maximum DB seq length: 200000000
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                                                                                                                                                                                                                                          Searched:
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Perfect score:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein search, using sw model
PIR_73:*
1: pir1:*
2: pir2:*
3: pir3:*
                                                                                                                                                                                                                                                                                           BLOSUM62
                                                                                                                                                                                                                                                                                                                           US-10-079-075-7
190
                                                                                                                                                                                                                                        283224 seqs, 96134422 residues
                                                                                                                                                                                                                                                                         Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                             June
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                          2003, 11:48:06 ; Search time 17.4255 Seconds
(without alignments)
231.709 Million cell update
                                                                                    summaries
                                                                                                                                                                                                        283224
                                                                                                                                                                                                                                                                                                                                                                                            cell updates/sec
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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| Regult No. | Score | Query Match | Length | BB | ID | Description |
|---------------|-------|----------------|--------|----|--------|--------------------|
| ъ | 71.5 | 7. | 349 | 2 | C84477 | hypothetical prote |
| 2 | δ | 33.7 | 114 | N | T17699 | o. |
| w | | ۳ | 100 | N | 833338 | protamine P2 - red |
| 4. | | ۳ | 513 | N | T42050 | transp |
| ທ | 59 | | 263 | N | E86215 | - |
| 6 | 58 | | 650 | N | S24610 | major membrane cyt |
| 7 | 57.5 | 30.3 | 102 | N | 833331 | Ç, |
| 89 | 7. | | 651 | N | S24609 | ~ |
| 9 | | 0 | 33 | N | B26762 | protamine (mugilin |
| 10 | υı | | 74 | N | B71866 | a |
| 11 | 56.5 | 9 | 115 | N | T43950 | hypothetical prote |
| 12 | | 9 | 33 | N | A26762 | C |
| 13 | G | 9 | 211 | ผ | C83809 | |
| 14 | Ü | ٩ | 30 | ۲ | CLHRY2 | protamine YII - Pa |
| 15 | | 9 | 30 | Ц | CLHR2A | |
| 16 | | 9 | 87 | N | S00180 | spermatid protein |
| 17 | 55 | 28.9 | 184 | N | T13097 | probable minor tai |
| 18 | | | 355 | N | T24010 | hypothetical prote |
| 19 | | 8 | 34 | ผ | JN0582 | |
| 20 | 4. | .8 | 180 | N | F85355 | Ö. |
| 21 | | 28.4 | 331 | N | S43070 | ۳ |
| 22 | | 28.4 | 533 | N | A72593 | - |
| 23 | | 8 | 1153 | N | F84468 | ۳ |
| 24 | Ü. | 8 | 31 | Н | CLHRZ | |
| 25 | 53.5 | 28.2 | 31 | ب | CLHRZA | 7 |
| 26 | Ū | 8 | 58 | N | S10755 | St2k |
| 27 | Ü. | 8 | 62 | N | S10754 | 3S |
| 28 | Ü | 8 | 102 | N | 833333 | 77 |
| 29 | 53.5 | 28.2 | 102 | N | 833332 | P2 - |
| | | | | | | • |

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R;Graves, M.V.; Van Etten, J.L. submitted to the EMBL Data Library, May 1999 A;Reference number: Z18806
                                                                                                                                                                                                                                                                                                                                                                                                                                                      arginine-rich protein a209R - Chlorella virus PBCV-1
C;Species: Chlorella virus PBCV-1
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R;Lin, X.; Kaul, S.; Rounsley, S.D.; Shea, T.P.; Benito, M.I.; Town, C.D.; Fujii, C.Y.; M.; Koo, H.; Moffat, K.S.; Cronin, L.A.; Shen, M.; Vanaken, S.E.; Umayam, L.; Tallon, L. euss, D.; Nierman, M.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, Nature 402, 761-768, 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  hypothetical protein At2g06420 [imported] - Arabidopsis thaliana C;Species: Arabidopsis thaliana (mouse-ear cress) C;Date: 02-Feb-2001 #sequence_revision 02-Feb-2001 #text_change 02-Feb-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-349 <STO>
                                                                                                                                                                                                                               A; Molecule type: DNA
A; Residues: 1-114 < GRA>
                                                                                                                                                                                                                                                                                                                  A; Accession: T17699
                                                                                                                                                                                                                                                                                                                                                                                                                                  C; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Map position:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Genetics:
A;Gene: At2g06420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Accession: C84477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Title: Sequence and analysis of chromosome 2 of the plant Arabidopsis thaliana. A;Reference number: A84420; MUID:20083487; PMID:10617197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C; Accession:
                                                                                                                                                                       ;Cross-references: EMBL:U42580; NID:g4028896; PIDN:AAC96577.1;Experimental source: specific host Chlorella strain NC64A
                                                                                                                                                                                                                                                                              Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best
                          Query Match
Best Local Similarity
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     Conservative
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33.7%; Score 64; DB 2;
45.7%; Pred. No..1.1;
tive 7; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           37.6%; Score 71.5; DB 2; Length 349;
41.9%; Pred. No. 0.47;
tive 10; Mismatches 14; Indels
                                                       Length 114;
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APPLICANT:

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Query Match
Best Local Similarity
"atches 6; Conservi
          RESULT 14
PCT-US95-09339-65
Sequence 65, Application PC/TUS9509339
GENERAL INFORMATION:
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LENGTH: 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 65, Applicat GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/482,611B CURRENT FILING DATE: 2000-01-14 PRIOR APPLICATION NUMBER: US 08/801,028 PRIOR FILING DATE: 1997-02-19 PRIOR APPLICATION NUMBER: US 08/279,472 PRIOR FILING DATE: 1994-07-22 NUMBER: US 08/279,472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS: 102
                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 22-JUL-1994
INFORMATION FOR SEQ ID NO: 6
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                          HYPOTHETICAL: NO
FRAGMENT TYPE: COMPLETE PEPTIDE
ORIGINAL SOURCE: SYNTHETIC
IMMEDIATE SOURCE: SYNTHETIC
PUBLICATION INFORMATION: NOT PREVIOUSLY PUBLISHED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WORDPERFECT 5.1+
CURRENT APPLICATION DATA:
TOTAL MINMERS. DCT/US95/09:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OTHER INFORMATION: Lytic Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 21-JUL-1994
PRIOR APPLICATION DATA: 08/279,472
APPLICATION NUMBER: 08/279,472
                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: L:
MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION:
APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity 30.(
nes 6; Conservative
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                                                                                                                                                                                                                                                                                                                                                     DESCRIPTION:
                                                                                                                                                                                                                                                                                                                                                                                                TYPE: AMINO ACID
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                                                                                                                                           10 RVVRRVVRRVRRVVRV 29
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                                                                                                               RIARKILKRIKKIVRKFIRI 23
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                                                                                                                                                                                                                                                                                                                                                   PEPTIDE
                                                                                                                                                                                              35.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       UBIQUITIN-LYTIC PEPTIDE FUSION GENE CONSTRUCTS, PROTEIN PRODUCTS DERIVING THEREFROM, METHODS OF MAKING AND USING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            35.2%; Score 57; DB 30.0%; Pred. No. 0.1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       65:
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                                                                                                                                                                                                Score 57; DB
Pred. No. 0.1;
                                                                                                                                                                                Mismatches
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                                                                                                                                                                                                              DB 5;
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                                                                                                                                                                                                              Length 27;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 23, Applicat Patent No. 5561107 GENERAL INFORMATION:
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PILING DATE: 22-JUL-1994
INFORMATION FOR SEQ ID NO: 65:
SEQUENCE CHARACTERISTICS:
LENGTH: 27
THE SECOND 
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TITLE OF INVENTION: CONN
TITLE OF INVENTION: METH
NUMBER OF SEQUENCES: 98
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy di
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: JAYNES, JI
APPLICANT: JULIAN, GO
TITLE OF INVENTION: N
NUMBER OF SEQUENCES:
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DESCRIPTION: PE
'HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FRAGMENT TYPE: COMPLETE PEPTIDE
ORIGINAL SOURCE: SYNTHETIC
IMMEDIATE SOURCE: SYNTHETIC
PUBLICATION INFORMATION: NOT PREVIOUSLY PUBLISHED
                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: 0
FILING DATE: 04-08-94
                                                                                                                                                                                                                                                                                                                                      COMPUTER: APPLE MACINTOSH
OPERATING SYSTEM: MACINTO
SOFTWARE: M.S. WORD 5.0
CURRENT APPLICATION DATA:
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PRIOR APPLICATION DATA:
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APPLICATION NUMBER: PC:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: 200 PARK DRIVE, SUITE
STREET: P.O. BOX 14329
CITY: RESEARCH TRIANGLE PARK
                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/08/231,730A FILING DATE: 04-20-94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                    APPLICATION NUMBER: 0
                                                                                                  APPLICATION NUMBER: 0 FILING DATE: 06-04-93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: STEVEN J. HULTQUIST
ADDRESSEE: INTELLECTUAL PROPERTY/TECHNOLOGY LAW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
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   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10 RVVRRVVRRVRRVVRV 29
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/08231730A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DISKETTE,
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08/148,889
                                                                 08/148,491
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D OF ENHANCING WOUND HEALING
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                                                              Query Match
Best Local S
Matches 6
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                                                                                                                                                          MOLECULE TYPE:
DESCRIPTION: PEPTIDE
HYPOTHETICAL: NO
FRAGMENT TYPE: COMPLETE PEPTI
ORIGINAL SOURCE: SYNTHETIC
IMMEDIATE SOURCE: SYNTHETIC
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                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
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MEDIUM TYPE: DISKETTE, 3.
COMPUTER: APPLE MACINTOSH
                                                                                                                                              PUBLICATION INFORMATION: NOT PREVIOUSLY PUBLISHED
                                                                                                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION: TELEPHONE: (919)990-9531
                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
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APPLICATION NUMBER:
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ADDRESSEE: INTELLECTUAL PROPERTY/TECHNOLOGY LAW
STREET: 200 PARK DRIVE, SUITE 210
STREET: P.O. BOX 14329
CITY: RESEARCH TRIANGLE PARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: JULY 2
APPLICATION NUMBER:
FILING DATE: 04-20-
                                                             Local Similarity es 6; Conserv
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                                                                                                                                                                                                                                                                           TYPE: AMINO ACID
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                                                                                                                                                                                                                                                                                                                                                                                                            NAME: WASSERMAN, FRAN REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 11-08-
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 0
FILING DATE: 06-04-93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 04-20-94
APPLICATION NUMBER: 0
FILING DATE: 04-08-94
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                           10 RVVRRVVRRVVRRVVRV 29
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                                                                                                                                                                                                                                                                                                                                            (919)990-9532
                                                              Conservative
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                                                                                                                                                                                            COMPLETE PEPTIDE
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UMBER: 08/225,476
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Pred. No.
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US-09-482-611B-65
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                                                                                                 Sequence 65, Application US/09482611B Patent No. 6448391
                                                                                   GENERAL INFORMATION:
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Best Local (
   APPLICANT: Garbarino, Joan
APPLICANT: Belknap, William
TITLE OF INVENTION: Ubiquitin-Lytic Peptide Fusion Gene Constructs, Protein Products
TITLE OF INVENTION: Therefrom, and Methods of Making and Using Same
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APPLICATION NUMBER: 08/50:
FILING DATE: 21-JUL-1995
APPLICATION NUMBER: U.S. (
FILING DATE: 22-JUL-1994
ATTORNEY/AGENT INFORMATION:
NAME: WALKER, BARBARA W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
TILE REFERENCE: 2093-149
                                                                                                                                                                                                                                                                                                                                                            HYPOTHETICAL: NO
FRAGMENT TYPE: COMPLETE PEPT
ORIGINAL SOURCE: SYNTHETIC
IMMEDIATE SOURCE: SYNTHETIC
PUBLICATION INFORMATION: NOT
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TELECOMMUNICATION INFORMATION:
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OPERATING SYSTEM:
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Y: USA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     E: ROTHWELL, FIGG, ERNST & KURZ
555 Thirteenth Street N.W.
                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (202) 783-6031
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LINEAR
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UBIOUTIN-LYTIC PEPTIDE FUSION GENE
CONSTRUCTS, PROTEIN PRODUCTS DERIV
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                                                                                                                                                                                                                                                                                          Score 57;
Pred. No.
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GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Ronald, Montelaro C.
APPLICANT: Tencza, Sarah B.
APPLICANT: Mietzner, Timothy A.
TITLE OF INVENTION: NOVEL ANTIMICROBIAL PEPTIDES
NUMBER OF SEQUENCES: 169
CORRESPONDENCE ADDRESS:
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MOLECULE TYPE:
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APPLICATION NUMBER:
FILING DATE: 26-JAN-
NAME: Rochelle K. Seide
REGISTRATION NUMBER: 32,300
REFERENCE/DOCKET NUMBER: AP30421-A
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-705-5000
                                                                            CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION UNMBER: 08/71
FILING DATE: 24-JAN-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                             CURRENT APPLICATION DATA:
APPLICATION NUMBER: US
FILING DATE: 18-SEP-19
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MEDIUM TYPE: Diskette
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OPERATING SYSTEM:
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REFERENCE/DOCKET NUMBER: AP30421
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30 Rockefeller Plaza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/08932682
                                                                                                                                                                                                                                                                                                              USA
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24-JAN-1997
                                                                                                                                                             18-SEP-1997
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                                                                                                                 08/786,748
                                                                                                                                                                              US/08/932,682
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Pred. No. 0.058;
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SEQUENCE CHARACTERISTICS:
LENGTH: 28 amino acids
TYPE: amino acid
STRANDEDNESS: Bingle
TOPOLOGY: linear
MOLECULE TYPE: NO: 5945507e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Patent No. 595573
GENERAL INFORMATION:
APPLICANT: Jesse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 65, Application US/08505486 Patent No. 5955573
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Best Local Similarity
                                                                                                                                                                                                                                                             TELEFAX: (202)783-6031
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: U.S. 0
PILING DATE: 22-JUL-1994
CLASSIFEICATION: 536
ATTORNEY/AGENT INFORMATION:
NAME: WALKER, BARBARA W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: JESSE M. ITITLE OF INVENTION: UTITLE OF INVENTION: UTITLE OF INVENTION: UNMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                             REGISTRATION NUMBER: 35,400
REFERENCE/DOCKET NUMBER: 20:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202)783-6040
TELEPAX: (202)783-6031
                                                                                                                               HYPOTHETICAL: NO FRAGMENT TYPE: ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:
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                                                                                                IMMEDIATE SOURCE: SYNTHETIC PUBLICATION INFORMATION: NOT
                                                                                                                                                                               MOLECULE TYPE:
DESCRIPTION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08/505,486 FILING DATE: 21-JUL-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM COMPOPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STATE: D. C. COUNTRY: USA
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                                                                                                                                                                                                                TOPOLOGY:
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555 Thirteenth Street N.W.
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                                                                                                                                                                               PEPTIDE
                                                                                                                                                COMPLETE PEPTIDE
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               35.2%; Score 57; DB
30.0%; Pred. No. 0.1.
tive 12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   UBIQUTIN-LYTIC PEPTIDE FUSION GENE
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                                                                                                  NOT PREVIOUSLY PUBLISHED
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Pred. No. 0.058;
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                                                DB 2;
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                                              Length 27;
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Best Local S
Matches 12
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GENERAL INFORMATION:
APPLICANT: Pionee
TELEFAX: (515) 248-4844 (INFORMATION FOR SEQ ID NO: 9: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: (515) 334-6883
                                                                                                      ATTORNEY/AGENT INFORMATION:
NAME: Yates, Michael E.; Sweeney, Patricia A.;
NAME: Roth, Michael J.; & Simon, Soma G.
REGISTRATION NUMBER:
                                REFERENCE/DOCKET NUMBER: 234R2-PCT
TELECOMUNICATION INFORMATION:
TELEPHONE: (515) 248-4800
TELEPHAX: (515) 248-4844
                                                                                                                                                                                                                                                                                   SOFTWARE: Microsoft Windows Notepad CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3
COMPUTER: IBM Compatible
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APPLICATION NUMBER: US 08/079,512
FILING DATE: 18-UN-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 22
CORRESPONDENCE ADDRESS:
ADDRESSEE: Pioneer Hi-Bred International, Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: ///
CTTY: Des Moines
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                              OPERATING SYSTEM:
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                                                                                                                                                                                                                                 CLASSIFICATION:
                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                    3.5 inch, 1.44 Mb storage
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Pred. No. 0.015;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 31;
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                                                                                                                                                                                                               Sequence 160, Application US/08786748A Patent No. 5714577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: PatentIn Ver. 2.1 SEQ ID NO 78
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                                                                                                                                                                                                                                                                                                                                                                                      Matches
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Best Local Similarity
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NUMBER OF SEQ ID NOS: 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/413,814
CURRENT FILING DATE: 1999-10-07
EARLIER APPLICATION NUMBER: DE 198 46 493.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Hofle, Gerhard
APPLICANT: Mueller, Joachim
APPLICANT: Reichenbach, Hans
TITLE OF INVENTION: DNA sequences for enzymatic synthesis of polyketide of INVENTION: heteropolyketide compounds
FILE REFERENCE: PCT/US 99/23535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Bristol-Myers Squibb, Co. APPLICANT: Beyer, Stefan
                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Cino, Paul M
APPLICANT: Dougherty, Brian A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Bloecker, APPLICANT: Brandt, Po
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Goldberg, Steven L
APPLICANT: Hofle, Gerhard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
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                                                                                                                          APPLICANT: Tencza, Sarah B.
APPLICANT: Mietzner, Timothy A.
TITLE OF INVENTION: NOVEL ANTIMICROBIAL PEPTIDES
                                                                                             CORRESPONDENCE ADDRESS:
                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: protein
                             CITY: New York
STATE: New York
                                                            STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: amino acid
STRANDEDNESS: si
                 COUNTRY:
                                                                               ADDRESSEE:
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10112-0228
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                                                                                                                                                                                Ronald,
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Pred. No. 0.015;
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                                                                                 Donohue & Raymond
                                                                                                                                                                                                                                                                                                                                                                                                                     DB 4;
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US-08-436-703B-17
                                                                  ; AUTHORS: N; TITLE: N/A
US-08-436-703B-5
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                 Query Match
Best Local Similarity
             Matches
                                                                                                                                                                                                                                        NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
APPLICATION NUMBER: N/A
FILING DATE: N/A
                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC COMPATIBLE
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: MS-DOS
SOFTWARE: WordParfect 6;
SOFTWARE: ASCII (DOS) Text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/436,703B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PUBLICATION INFORMATION:
                                                                                                       ORGANISM: N/A
PUBLICATION INFORMATION:
                                                                                                                                      MOLECULE TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 39 amino acids
                                                                                                                                                                                                                                                                               NAME: Rohm, Benita J.
REGISTRATION NUMBER: 28,664
REFERENCE/DOCKET NUMBER: 7W
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity 50.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS:
                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: FILING DATE: 08-MAY
                                                                                                                                                                                                                                                                   TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                    IOPOLOGY:
                                                                                                                                                                              STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION:
? 15;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6601 Woodward Avenue
             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Andrews,
                                                                                                                                                                                                                                                         313-965-1951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        United States of America
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wakefield,
                                                                                                                                                                 N/A
                                                                                                                                                                                                                                                                     313-965-1976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Benita J, Rohm, Esq.
                                                                                                                                                    peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Floppy disk 1.44Mb, 3.5"
                                                                                                                                                                                                                                                                                                                                                                                                             08-MAY-1995
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NOVEL PEPTIDES FOR
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ANTICOAGULATION REVERSAL
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                         Score 66; DB 2
Pred. No. 0.01;
                                                                                                                                                                                                                                                                                                 7WK-060548-00233
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Pred. No. 0.01;
0; Mismatches
           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 2;
                                      DB 2; Length 39;
           15; Indels
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US-08-179-632-9
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Patent No. 560791
                                                                                                                                                                 Sequence 9, Application US/08440174A Patent No. 5717061
                                                                                                                                                                                                                                                                                                              Matches
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STREET: //-
CTTY: Des Moines
                                                                                CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES:
                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 0. CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                           Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OPERATING SYSTEM:
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                                     CITY: Johnston
                                                      STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE:
ZIP: 50131
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             COUNTRY:
                                                                  ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                                                                            amino acid
                                                                                                            F: Zhong, Lingxiu
INVENTION: SYNTHETIC ANTIMICROBIAL PEPTIDES
                       Iowa
                                                      7100 N.W. 62nd Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (515)
                                                                                                                                        Rao, Gururaj A.
                                                                  PIONEER HI-BRED INTERNATIONAL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (515)
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STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-179-632-9
                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 31 amino acids
                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 08/0
FILING DATE: 06/18/93
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: Microsoft Wi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM: MEDIUM TYPE: Diskette,
                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                        NAME: Roth, Michael J. REGISTRATION NUMBER: 29, REFERENCE/DOCKET NUMBER:
                                                                 ch 39.5%; l Similarity 42.9%; 12; Conservative
1 RRIYRAIRHIPRRIRGWLRRIGRRIERV 28
                                 6 RRVVRVVRRVVRRVRRVVRVVRRV 33
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     E: Pioneer Hi-Bred International, Inc 700 Capital Square, 400 Locust Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   United States
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                                                                                                                                                                                                                                                                                      245-3634
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SYNTHETIC ANTIMICROBIAL PEPTIDES
                                                                                                                                                                                                                                                                                                        245-3594
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3.5 inch, 1.44 Mb storage
                                                                                                                                                                                                                                                                                                                                            0233 US
                                                                                     Score 64; DB 1;
Pred. No. 0.015;
                                                                     Mismatches
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                                                                                                    DB 1;
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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 2000000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scoring table:
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162
1 VRRVVRRVVRRVVRRVVRRVVRRVVRRVVRRVVRR 36
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Issued_Patents_AA:*

1: /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
2: /cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
3: /cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
4: /cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
5: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
6: /cgn2_6/ptodata/1/iaa/backfiles1.pep:*
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Copyright (c) 1993 - 2003 Compugen Ltd.
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US-08-440-174A-9

PCT-US95-00062-9

US-09-413-814-78

US-08-786-748A-160

US-08-786-748A-160

US-08-805-486-65

US-08-801-028-65

US-08-801-028-65

US-09-432-6118-65

PCT-US95-09338-65

PCT-US95-09338-65
                                                     US-08-231-730A-23

US-08-427-001C-23

US-08-457-798-23

US-08-457-171-23

US-08-505-486-23

US-08-689-489C-23

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US-09-340-154-23

US-09-340-154-23

US-09-482-611B-23
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US-08-436-703B-5
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                                               Sequence 17, Appl
Sequence 9, Appli
Sequence 9, Appli
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Sequence 78, Appli
Sequence 78, Appl
Sequence 160, App
Sequence 160, App
Sequence 65, Appl
Sequence 23, Appl
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| ω | ω | ω | ω. | ω | 33.6 | ٠. | .4 | ٠. | 4 | | 4 | ٠. | 4. | ٠. | <u>ب</u> | <u>ب</u> | 5 |
| 28 | 28 | 28 | 28 | 28 | 96 | 28 | 28 | 27 | 27 | 27 | 27 | 27 | 27 | 105 | 37 | 37 | 37 |
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| US-08-786-748A-43 | 6-748A-2 | 6-74 | | 6-748A-1 | -255- | 2-68 | 86-748A-1 | -US95-09339-6 | -US95-09338- | ·611B-6 | 54- | 028-6 | .486-6 | US-08-668-255-5 | 5-09339-2 | | |
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ALIGNMENTS

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US-08-436-703B-17
                                                                                           TELEPHONE: 313-965-1976
TELEPAX: 313-965-1951
INFORMATION FOR SEQ ID NO: 17
SEQUENCE CHARACTERISTICS:
LENGTH: 38 amino acids
TYPE: amino acid
GERANDENTES. NO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: Wakefie
APPLICANT: Andrews
APPLICANT: Stanley
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 17, Application US/08436703B Patent No. 5919761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Wakefield, Thomas W
APPLICANT: Andrews, Philip C.
APPLICANT: Stanley, James C.
TITLE OF INVENTION: NOVEL PEPTI
TITLE OF INVENTION: HEPARIN AND
                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/08/
FILING DATE: 08-MAY-1995
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: N/A
FILING DATE: N/A
ATTORNEY/AGENT INFORMATION:
                 TOPOLOGY: N/A MOLECULE TYPE: I ORIGINAL SOURCE:
                                                                                                                                                                                                                    NAME: Rohm, Benita J.
REGISTRATION NUMBER: 28,664
REFERENCE/DOCKET NUMBER: 7NI
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  OPERATING SYSTEM: MS_DOS
SOFTWARE: WordPerfect 6;
SOFTWARE: ASCII (DOS)Text
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy of COMPUTER: IBM PC com
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 1.
CORRESPONDENCE ADDRESS:
ADDRESSEE: Benita J,
                                                                            STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: Detroit
STATE: Michigan
COUNTRY: United States of America
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STREET: Suite 1525
ORGANISM: N/A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZIP: 48226
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Floppy disk 1.44Mb, 3.5"
                                                                              N/A
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ANTICOAGULATION REVERSAL
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GENERAL INFORMATION:

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US-10-079-075-12
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; OTHER INFORMATION: Artificial peptide derived from HIV-1
US-09-785-058-11
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US-09-785-059-12
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VRIVUS DEVIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: PastSEQ for Windows Version 3.0
SEQ ID NO 11
LENGTH: 36
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Best Local Similarity
Matches 32; Conserv
                APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT PILLING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
SOFTWARE: PastSEQ for Windows Version 3.0
SEQ ID-NO 12
LENGTH: 48
TYPE: PRT
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SOPTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 12
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Best Local :
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
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ORGANISM: Artifical sequence
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RGANISM: Artificial Sequence
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Pred. No. 5.6e-11;
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Pred. No. 1.9e-09;
D; Mismatches 3;
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; FEATURE: ; OTHER INFORMATION: artificial peptides derived from HIV-1 US-10-079-075-12
Job time: 19.1489 secs
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US-09-785-058-12
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CURRENT FILING DATE: 201-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 12
LENGTH: 48
TYPE: PRT
CORRANISM: Artifical sequence
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Best Local Similarity
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A 34001 / 072396.0222
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Pred. No. 1.9e-09
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Pred. No. 1.9e-09;
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; OTHER INFORMATION: Artificial peptide derived from HIV-1 US-09-785-058-8
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US-09-785-058-8
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 8
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CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 8
SEQ ID NO 8
                                                                                        NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 8
LENGTH: 48
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Best Local !
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CURRENT FILING DATE: 2001-02-16
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
                                  TYPE: PRT ORGANISM: Artifical sequence FEATURE:
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ORGANISM: Artifical
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Pred. No. 2.3e-14;
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Pred. No. 2.3e-14;
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; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Artificial peptide derived from HIV-1
US-10-079-075-11
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US-10-079-075-11
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SEQ ID NO 11
LENGTH: 36
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Best Local S
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
                                                                                                                                                                                                                                                                     CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A33577 / 072396.0217
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CURRENT FILING DATE: 2001-02-16
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ORGANISM: Artifical sequence
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OTHER INFORMATION: Artificial peptide derived from HIV-1
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Pred. No. 5.6e-11;
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Pred. No. 5.6e-11;
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RESULT 12 US-09-785-058-11 Sequence 11, Application US/09785058 ; Sequence 11, Application US/09785058 ; Publication No. US20030036627A1

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US-10-079-075-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                           US-09-785-059-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Artifical sequence
FEATURE:
OTHER INFORMATION: Artificial peptide derived from HIV-1
US-09-785-058-6
                                                                                      ; OTHER INFORMATION: Artificial peptide derived from HIV-1
US-09-785-059-7
                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 6, Application US/09785058
Publication No. US20030036627A1
                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 7
                                                                                                                                                                                                                                                                                                                                                                      Sequence 7, Application US/09785059 Patent No. US20020169279A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
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LENGTH: 36
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Best Local Similarity
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                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                                                                                                                APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE: A 34001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne
                                                                                                                        ORGANISM: Artifical sequence FEATURE:
                                                                                                                                                           TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
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ITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
ILE REFERENCE: A 34001 / 072396.0222
                                                                                                                                                                            ENGTH: 42
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100.0%; P:
vative 0;
                                  100.0%;
                    Score 162; DB 9
Pred. No. 2e-14;
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Pred. No. 1.7e-14;
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                                                   DB 9;
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US-09-785-059-8
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Patent No. US20020169279A1
                                                     GENERAL INFORMATION:
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APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS:
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TYPE: PRT
ORGANISM: Artifical sequence
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SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 7
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                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIGUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
                                                                                                                                                                                                                                                                                   SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                   FEATURE:
OTHER INFORMATION: Artificial peptide derived from
                     1 VRRVVRRVVRVVRRVVRRVVRRVVRRVVRRVVRR 36
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100.0%; Pred. No. 2e-14;
tive 0; Mismatches
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Pred. No. 2e-
0; Mismatches
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Maximum DB
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/cgn2_6/ptodata/1/pubpaa/PCTUS_PUBCOMB.pep:*
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/cgn2_6/ptodata/1/pubpaa/US09_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
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194.092 Million cell updates/sec
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US-09-785-059-8
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| | 30 | 30 | 30 | | 30 | 31 | 31 | 31 | 32 | 33 | 33 | 33 | 33 | | 40 | 40.7 | 40.7 | | 44.4 | 4. | \vdash | 51.2 | \vdash | 54.3 | 54.3 |
| 345 | 345 | | | | | | | | | 12 | 12 | 12 | 96 | 105 | 31 | 31 | 3 <u>1</u> | 28 | 28 | 28 | 31 | 31 | 31 . | 24 | 24 |
| 10 | 9 | 9 | 10 | 10 | 9 | 9 | 10 | 10 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| US-09-779-451-8 | 741-4 | US-10-040-349B-1 | US-09-840-009-37 | US-09-840-009-36 | US-10-060-102-8 | US-09-738-626-6303 | US-09-810-310-4 | US-09-810-310-5 | US-10-093-892-9 | US-09-785-058-4 | US-10-079-075-4 | US-09-785-059-4 | US-10-093-892-7 | US-10-093-892-5 | US-09-785-058-3 | US-10-079-075-3 | US-09-785-059-3 | US-09-785-058-1 | US-10-079-075-1 | 9-785-059- | US-09-785-058-2 | US-10-079-075-2 | US-09-785-059-2 | 9-785-058-1 | US-10-079-075-10 |
| Sequence 8, Appli | 49 | ŗ | Sequence 37, Appl | Sequence 36, Appl | æ | Sequence 6303, Ap | 4 | Sequence 5, Appli | 9 | 4. | Sequence 4, Appli | 4, | 7, | <u>ა</u> | e 3, | ω | w - | 1 | 1, | <u>,</u> | ν, | <u>ب</u> | <i>ا</i> | Sequence 10, Appl | Sequence 10, Appl |

ALIGNMENTS

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; ORGANISM: Artifical sequence ; FEATURE: OTHER INFORMATION: Artificial peptide derived from HIV-1 US-09-785-059-6
                                                                                                                                                                                                                   RESULT 2
US-10-079-075-6
Sequence 6, Application US/10079075
Publication No. US20020188102A1
GENERAL INFORMATION:
APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 6, Application US/09785059.
Patent No. US20020169279A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 36
TYPE: PRT
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                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
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Pred. No. 1.7e-14;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 36;
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RESULT 14
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Best Local S
Matches 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      positive charge and have anti-neoplastic activity. The peptides are specifically useful for the lysis of cancer cells. Normal mammalian cells are resistant to lysis due to their highly organised cytoskeleton, cancerous cells however posses an inferior and structurally compromised cytoskeleton which when acted upon by lytic peptides will cause cell lysis. This allows the lytic peptides to be used for in vivo treatment of cancers. The peptides are esp. useful for the treatment of female mammalian cancers e.g. breast, ovarian, uterine and cervical cancers. The peptides can however be used to treat most forms of cancer. cystic fibrosis, pneumonia, bronchitis, and bronchopulmonary viral and microbial infections.
            WO9513085-A1
                                                                                                                                                  Synthetic
                                                                                                                                                                                                                  Tryptic digestion resistant lytic peptide.
                                                                                                                                                                                                                                                                                                  AAR74713 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Method of combatting mammalian neoplasias and other disease states by delivering non-naturally occurring, non-onco:cytologically proliferative lytic peptide
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                                                                                                                                                                            neoplasia.
                                                                                                                                                                                        Lytic; methylated;
                                                                                                                                                                                                                                             11-JAN-1996
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                                                                                                          Modified-site
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8; Conserv
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                                                                                                                                                                                                                                                                                                                                                                      KKFVKKVAKVAKKVAKKVAKKVAKKVAKK 37
                                                                                                                                                                                                                                                                                                                                                                                                RRVVRRVVRRVVRRVVRRVVRRVVRRVVRR 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               37 AA;
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                                                                                                      Location/Qualifiers
1..37
                                                                                            /note=
                                                                                                                                                                                        tryptic
                                                                                                                                                                                                                                             entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                       35.2%;
                                              "the epsilon-amino groups of the lysine residues and the alpha-amino group of the N-terminal amino acid are sufficiently methylated to impart enhanced proteolytic
                                    digestion resistance
                                                                                                                                                                                                                                                                                                                                                                                                                            16;
                                                                                                                                                                                       resistant; immunological; infection;
                                                                                                                                                                                                                                                                                                   37
                                                                                                                                                                                                                                                                                                                                                                                                                         Score 57; DB 1
Pred. No. 0.94;
6; Mismatches
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                                  to the peptide"
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Best Local S
Matches 8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAR74699-R74733 are synthetic lytic peptides which are rich in the amino acids lysine, valine and alanine. They are useful in the treatment of neoplasia and viral, protozoan, fungal or yeast infections. The lysine residues and the N-terminal amino acid residue of the peptides are methylated which imparts enhanced resistance to proteolytic digestion and allows effective in vivo
                                           Jaynes JM,
                                                                                                                                               04-JUN-1993;
                                                                                                                                                                                             02-JUN-1994;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New lytic peptide(s) for treating contain mainly alanine, valine and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Julian
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8; Conser
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                                           Julian
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     #23, for treating a pulmonary disease state.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     35.2%;
                                                                                                                                                                                                                                                                                                                                            "Lys residues are opt. methylated and/or Arg residues are glyoxylated"
                                                                                                                                                                                                                                                                                                                                                                                                                  "Opt. methylated or glyoxylated"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     r treating e.g. infections and neoplasias - valine and lysine residues with the lysine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16;
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Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      activity;
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RESULT 11
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 Query Match
Best Local Similarity
                                                                                                                                                                                                                    AAR89967-R90021 and AAR90726-R90763 represent synthetic analogues of naturally occurring lytic peptides. Lytic peptides destroy prokaryotic and other non-host cells by disrupting the cell membrane and promoting cell lysis. Synthetic lytic peptide analogues have similar or higher levels of lytic activity for many different types of cells, compared to naturally occurring forms. The concentration of the synthetic analogue required to lyse microbial pathogens does not lyse normal mammalian cells. The lytic peptides can be expressed in plants to allow for the
                                                                                     development of disease-resistant plants. The peptides are useful in promoting wound healing and combatting bacterial infections in plants. The lytic peptides can also be used for combatting protozoal, fungal, viral or bacterial infections or neoplassias in mammals and plants. Lytic peptide-ubiquitin fusion proteins are suitable for production in bacterial hosts. Bacteria lack the hydrolase which cleaves the peptide from ubiquitin, and therefore the active (and cytotoxic) lytic peptide will not be released in the host cells. The recombinantly produced lytic peptide can be retrieved from the fusion protein by cleavage in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Lytic peptide; ubiquitin; synthetic analogue; cell membrane; cell microbial pathogen; disease-resistant plant; bacterial infection; protozoa; virus; neoplasia; fusion protein; hydrolase.
                                                                                                                                                                                                                                                                                                                                                                                                      Lytic peptide(s), useful for developing disease-resistant plants - can be expressed as fusion protein with ubiquitin for stable prodn.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic lytic peptide #27.
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                                             Sequence
                                                                                                                                                                                                                                                                                                                                                             Claim 1; Page 82; 111pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          bacteria than DNA encoding the lytic peptide
35.2%;
30.0%;
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Pred. No.
Score
Pred.
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 NO ;
 DB 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 17;
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              Length 27;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cell lysis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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RESULT 12
AAR84150
                                                                                                                                                                          RESULT 13
AAR77064
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                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                   AAR84128-73 are amphipathic peptides which are able to stimulate th proliferative growth of fibroblasts and epithelial cells such as keratinocytes, hence enhancing wound healing in mammalian subjects. The peptides concomitantly have antimicrobial efficacy, against
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Use of amphipathic peptide(s) - for enhancing keratinocyte proliferation to promote wound
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAR84150 standard;
           Anti-cancer; lysis; amphipathic; neoplasia; tumour;
bronchopulmonary; viral; virus; analogue; magainin;
                                                            Synthetic
                                                                                                                                                        AAR77064 standard; peptide; 37 AA.
                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 7; Page 49; 64pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Jaynes JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19-APR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    02-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO9528832-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  amphipathic peptide; enha
wound healing; defensin;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peptide enhancer of fibroblast and keratinocyte proliferation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 06-JUN-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAR84150;
melittin; defensin.
                                                                                             20-MAY-1996
                                                                                                                                                                                                                                                                                                                                                                                                      sepsis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1995-382791/49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20-APR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (DEME-)
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4 RIARKILKRIKKIVRKFIRI 23
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                                                                                                                                                                                                                                                                                                        Similarity
8; Conserv
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                                                                                                                                                                                                                                         KKFVKKVAKVAKKVAKKVAKKVAKKVAKKVAKK
                                                                                                                                                                                                                                                                      RRVVRRVVRVVRRVVRRVVRRVVRRVVRR
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                                                                                                                                                                                                                                                                                                                                                                                                                      species
                                                            anti-neoplastic lytic peptide
                                                                                                                                                                                                                                                                                                                                                                                                     species including those which cause or otherwise mediate wound infection.
                                                                                                                                                                                                                                                                                                                                                                        37 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Julian GR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                         Conservative
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                                                                                           (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 entry)
                                                                                                                                                                                                                                                                                                                       35.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  enhance;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   antimicrobial.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12;
                                                                                                                                                                                                                                                                                                        16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 37
                                                                                                                                                                                                                                                                                                                       Score 57;
Pred. No:

    for enhancing fibroblast and
promote wound healing in a mammal

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 fibroblast; keratinocyte; proliferation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29
                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                       DB 16;
                                                                                                                                                                                                                                           37
                                                                                                                                                                                                                                                                       36
                                                                                                                                                                                                                                                                                                        11;
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                                                                                                                                                                                                                                                                                                                                    Length
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           cystic fibrosis;
cecropin;
                                                                                                                                                                                                                                                                                                                                        37
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Disclosure; Column 21; 62pp; English.

<u>, 7</u>

an

sequence represents an antimicrobial n analogue of the peptide LLP1 (see A

XXXBBBBBBBBBBBBBBBBBBBXX

Query Match Best Local (

Similarity

36.4%;

Score 59; DB 2 Pred. No. 0.41;

20; в ,-

Length 28 Indels

Conservative

9;

Mismatches

Gaps

0

0,

Sequence

28

A,

Matches

C faccalis, S. marcescens, Escherichia coli, fungi, protozoa and viruses in a mammalian host. They can be used to inhibit growth of diverse microorganisms such as bacteria, fungi, protozoa and DNA and RNA viruses and can be used in tissue culture to inhibit unwanted microbial growth, garticularly for the production of recombinant proteins or vectors for gene therapy. They can also be used in preventing infections through the sterilisation of wounds prior to suture and to sterilise surgical instruments. The unique structure of these antimicrobial peptides inparts high potency while selectivity is maintained, they are moderately haemolytic but only lyse red blood cells at high concentrations unlike melittin, a peptide extracted from bee venom, which is highly active against bacteria and lyses red blood cells showing little selectivity. The peptides target a membrane structure which makes it more difficult for a microorganism to develop a mechanism of relatively simple to prepare by standard synthetic peptide chemistry.

methicillin resistant S. aureus, Pseudomonas aeruginosa, Enterococcus

uence represents an antimicrobial peptide of the invention, alogue of the peptide LLP1 (see AAY32549). The peptides can treating infections caused by Staphylococcus aureus,

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RESULT 9
AAW05116
ID AAW0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
of a corresponding region of porcine somatotropin (pST). The peptides enhance the activity of pST and promote the growth of warm-blooded
                  New peptides are disclosed which, by virtue of having certain defined amino acids at every third or fourth residue, have a well defined secondary structure which mimics the helical conformation
                                                                                          Peptide(s) mimicking a helical region of porcine somatotropin - used in compositions to promote mammalian growth
                                                                                                                                                  Buckwalter BL,
                                                                                                                                                                                               31-MAR-1995;
                                                                                                                                                                                                                                             03-OCT-1996
                                                                                                                                                                                                                                                                  WO9630405-A1
                                                                    Claim 3;
                                                                                                                             WPI; 1996-485447/48
                                                                                                                                                                                                                     15-MAR-1996;
                                                                                                                                                                                                                                                                                                                                     Porcine
                                                                                                                                                                                                                                                                                                                                                            19-JUN-1997
                                                                                                                                                                                                                                                                                                                                                                                 AAW05116;
                                                                                                                                                                                                                                                                                                                                                                                                       AAW05116 standard; peptide; 17
                                                                                                                                                                         (AMCY)
                                                                                                                                                                                                                                                                                                           porcine somatotropin; pST; growth promoter; helical conformation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7
                                                                                                                                                                         AMERICAN CYANAMID
                                                                                                                                                                                                                                                                                                                                   somatotropin
                                                                    Page 17; 63pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            RVIRVVQGACRAIRHIPRRIRQGLRRIL 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RVVRVVRRVVRRVVRRVVRVVRRVV 34
                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                               95US-0415239
                                                                                                                                                                                                                     96WO-US03490
                                                                                                                                                 Shieh H,
                                                                                                                                                                                                                                                                                                                                     mimic.
                                                                    English
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Recombinant DNA

FPs have

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
            AAR92372-R92462 are lytic peptides used to create ubiquitin-lytic peptide fusion proteins in which the ubiquitin polypeptide is linked at its 3'-terminus to the lytic peptide. The lytic peptides are pref. selected from either the cecropins, defensins, sarcotoxins, melittin and magainins. The fusion proteins (FPS) are useful for treating protozoal, bacterial, fungal and viral infections and neoplasia (in plants and animals) in the same way as the FP alone, they also promote wound healing. FPS produced in bacteria may be cleaved in vitro by ubiquitin hydrolases to recover the active lytic peptide. FPS produced in eukaryotic cells are cleaved by endogenous enzymes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PS-7.6 monoclonal antibody. The peptides have the generic sequence XXIXXIXXXXX (I) or XXXXXIXXXXIXXIXXXV (II); where residues X are undefined other than the statement that the sequences differ from the native sequence of pST. Formula (II) represents a peptide in which the location of the essential amino acids is shifted by three amino acids, representing almost one turn along the helix. Preferably X(2) of (II) is IIe. Preferably the peptides contain Ser (as a promoter of helical conformation) as the amino acid immediately amino-terminal to the first Leu in (I) or to the first lie of (II) may be replaced by NIe. Furthermore, a Cys residue may be added to either or both ends of the peptides. The present sequence represents a specific example of the new
                                                                                                                                                                                                                                       New fusion protein of ubiquitin and a lytic peptide - for treating infections and neoplasia, heating wounds, etc. also related nucleic acid, vectors, and transformed cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ubiquitin;
stability;
                                                                                                                                                                                                       Claim 5; Page 26; 112pp; English.
                                                                                                                                                                                                                                                                                                             WPI; 1996-117061/12
                                                                                                                                                                                                                                                                                                                                               Belknap W,
                                                                                                                                                                                                                                                                                                                                                                                                                                      22-JUL-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24-JUL-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        08-FEB-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lytic peptide used in ubiquitin-lytic peptide fusion protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18-SEP-1996 (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAR92436;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAR92436 standard; peptide; 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               peptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        animals, especially pigs. They compete with pST for binding PS-7.6 monoclonal antibody. The peptides have the generic se
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO9603519-A1
                                                                                                                                                                                                                                                                                                                                                                                  (DEME-) DEMETER BIOTECHNOLOGIES (USDA) US SEC OF AGRIC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LRRIIRRLRRVIRRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             fusion protein; lysis; infection; neoplasia; wound healing; reduced toxicity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17
                                                                                                                                                                                                                                                                                                                                               Garbarino J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
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                                                                                                                                                                                                                                                                                                                                              Jaynes J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6
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Pred.
                                                                                                                                                                                                                                                                                                                                                                                                  LTD.
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0.33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
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RESULT 7
AAW47769
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                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                Amino acid sequence of Shiva-4 as an exemplary lytic peptide for use as an antimicrobial peptide contemplated for use in plant (trichophyte) transformants in the invention. It is a homologue of Shivas-2, -3 and -5 to -7. All of these Shiva peptides are also contemplated as having general utility in inducing lysis of cells in vitro. Shiva-4 may be too lytically active to be used in plants at high
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Transformed plants contg. heterolgous gene - expressing agent, or polypeptide high in essential amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Shiva-4; lytic peptide; antimicrobial peptide; disease-resistant trichophyte; Shiva-2; Shiva-3; Shiva-5; Shiva-6; Shiva-7.
26-JAN-1996;
24-JAN-1997;
                                                                       US5714577-A
                                                                                                        Synthetic
                                                                                                                                                            Antimicrobial
                                                                                                                                                                                 26-MAY-1998
                                                                                                                                                                                                                          AAW47769 standard; peptide; 28
                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                        expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Table
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1989-165650/22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (LOUU ) LOUISIANA STATE UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                02-NOV-1987;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02-NOV-1988;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-MAY-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO8904371-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Amino acid sequence of Shiva-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19-MAR-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAP91336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAP91336 standard;
                               24-JAN-1997;
                                                                                                                                      Antimicrobial;
                                                                                             Human immunodeficiency virus
                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                           amphipathic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           I; ; 56pp; English.
                                                                                                                                                                                                                                                                                                                         12;
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                                                                                                                                                                                                                                                                                                    VRRVVRVVRRVVRRVRRVVRVVRRVVR 35
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                                                                                                                                                                                                                                                                                                                                                                                         levels.
                                                                                                                                                                                                                                                                                                                                                                   28
                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Derrick KS
                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                           peptide LLP1 analogue.
                                                                                                                                                                                                                                                                                                                                                                    ΑĄ,
                                                                                                                           transmembrane protein; TM; lentivirus ic; antibacterial; antifungal; antivira
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                87US-0115941.
96US-0010634.
97US-0786748.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     88WO-US03908
                               97US-0786748.
                                                                                                                                                                                                                                                                                                                                   38.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   peptide;
                                                                                                                                                                                                                                                                                                                         15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28
                                                                                                                                                                                                                                                                                                                                  Score 63; DB 10;
Pred. No. 0.13;
                                                                                                                                                                                                                           . ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                27
                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                             Length 28
                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                            lytic peptide;
al; antiprotozoal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            antimicrobial
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RESULT 8
AAY32703
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Best Local S
Matches 11
                                                                                                                                                                    26-JAN-1996;
24-JAN-1997;
18-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to new antimicrobial peptides which correspond amino acid sequences in the transmembrane proteins of lentiviruses, i particular HIV and SIV. These peptides comprise arginine rich sequence which, when modelled for secondary structure, display high amphipathicity and hydrophobic moment. Also disclosed are structural and functional analogues and homologues of these peptides which also display antimicrobial activity. The peptides are highly inhibitory to microorganisms (bacteria, fungi, viruses and protozoa) but significan less toxic to red blood cells and other normal mammalian cells. Activis demonstrated against Gram positive and negative bacteria including the period of the contraction 
                                                                                                                                                                                                                                                                                                                                                                                                                                              growth inhibitor; sterilisation.
                                                                                                                                                                                                                                                                                                                                                                                  Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present sequence is one of 169 disclosed specific examples of the new peptides. It is an analogue of the peptide designated LLP (see AAW47614) which is a peptide from the transmembrane protein
                                                                                                                                                                                                                                                                                                31-AUG-1999.
                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Antimicrobial peptide; LLP1; SLP-1; LLP2; SLP2A; SLP2B; ELP; infection; growth inhibitor; microorganism; virus; gene therapy; vector production;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Antimicrobial peptide LLP1 analogue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-OCT-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY32703;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of HIV strain HXB2R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         is demonstrated against Gram positive and negative bacteria Pseudomonas aeruginosa, Staphylococcus aureus, Enterococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; Column 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Retroviral TM peptides - useful as antibacterial agents
Antimicrobial peptides useful for treating microbial infections
                                          WPI; 1999-508189/42.
                                                                               Mietzner TA,
                                                                                                                                                                                                                                                        18-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAY32703 standard;
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                                                                                                                          (UYPI-)
                                                                                                                                                                                                                                                                                                                                        JS5945507-A.
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                                                                                                                                                                                                                                                                                                                                                                                  immunodeficiency virus type 1
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                                                                                                                          VIND
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28 AA;
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                                                                                                                            PITTSBURGH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                  Montelaro RC,
                                                                                                                                                                  96US-0010634.
97US-0786748.
97US-0932682.
                                                                                                                                                                                                                                                        97US-0932682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               peptide;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            but significantly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
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RESULT 4
AAR60065
ID AAR6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
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Best Local (
The synthetic ampipathic alpha-helical lytic peptides given in AAR60057-71 were designed to provide antifungal or antimicrobia activity when expressed in monocot or dicot plants. They also
                                                                                                                                                                                     Synthetic polypeptide(s) and the nucleic acid encoding them - exhibits amphipathic alpha-helices and provide cell-expressable antimicrobial activity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              to prepare. The present sequence represents a specifically claimed protamine-like peptide with a charge of [+18]; this peptide also includes an RGD fibronectin receptor ligand motif. Peptide [+18RGD] improved the reversal of anti-Factor Xa activity of the low molecular weight heparin Enoxaparin to 72%, compared to only 30% reversal by protamine. Also, peptide [+18RGD] produced less decrease in platelet
                                                                                                                            Disclosure; Page 19; 25pp; English
                                                                                                                                                                                                                                                                                                         WPI; 1994-249137/30
                                                                                                                                                                                                                                                                                                                                                                  Rao AG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13-JAN-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12-JAN-1994;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             crop protection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Amphipathic partimicrobial
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                                                                                                                                                                                                                                                                                                                                                                                                                            (PION-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Antimicrobial peptide.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        peptide; alpha-helix; lytic peptide; antifungal;
al; fungus resistance; disease resistance;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
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Pred. No. 0.078;
0; Mismatches
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                                    antimicrobial
            They also have
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medical applications

RESULT 6
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RESULT 5
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AC AAR8
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                                                Matches
                                                          Query Match
Best Local Similarity
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                                                                                                                              AAR80727-R80748 are new amphipathic polypeptides. They have a broad spectrum of antimicrobial and antifungal activity. They can be used to treat or prevent infection in humans and animals or applied to plants as sprays, creams, dust, etc. The DNA encoding these peptides can also be incorporated into susceptible plants via the use of a non-phytotoxic vehicle adapted for systemic administration. This process imparts resistance to plant pathogens esp. fungi (e.g. rusarium graminareum, F.moliniforme, Aspergillus flavus, Alternaria longipes, Colletotrichum graminicola, Phytophthora megasperme, Sclerotinia sclerotonium). The peptides are esp. useful in transformed plants such as maize, sorghum, wheat, soya, alfalfa,
                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                      New antimicrobial amphipathic polypeptide(s) and related nucleic acids - for clinical use or esp. to increase resistance of plants
                                                                                                                                                                                                                                                                                   Claim 1; Page 17; 24pp;
                                                                                                                                                                                                                                                                                                           to fungal pathogens.
                                                                                                                                                                                                                                                                                                                                                             WPI; 1995-255059/33.
                                                                                                                                                                                                                                                                                                                                                                                      Rao AG,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic antimicrobial/antifungal polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAR80735;
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                                                                                                                                                                                                                                                                                                                                                                                                             (PION-)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            spectrum.
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12; Conserv
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RRIYRAIRHIPRRIRGWLRRIGRRIERV 28
                       RRVVRVVRRVVRRVVRRVVRVVRRV 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RRIYRAIRHIPRRIRGWLRRIGRRIERV
                                                                                                                       sunflower,
                                                                                              31
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                                                Conservative
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                                                                                              AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           95WO-US00062.
                                                          39.5%;
                                                                                                                       tobacco or tomato.
                                                                                                                                                                                                                                                                                   English.
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Pred. No. 0.11
7; Mismatches
                                                          Score 64;
Pred. No.
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                                               Mismatches
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                                                                      DB 16;
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                                                                     Length 31;
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                                               Indels
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WPI; 1995-276981/37

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RESULT 2
AAG65539
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XX AAG6
XX AAG6
XX AAG6
XX AAG1
XX AAG1
XX AAG2
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XX AAG2
XX AAG3
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Best Local :
The invention provides an antimicrobial compound (I) which is a peptide having 8-50 amino acids, a net charge of 4, a hydrophobic moment (microH) as a beta sheet which is 0.2 higher than its micro H as alpha helix, and having detectable membrane disrupting activity against a microbial pathogen, and substantially no membrane disrupting activity against mammalian cells. (I) is useful for inhibiting microbial activity. (I) has a detectable membrane disrupting activity against a pathogen, and is useful for inhibiting non-microbial pathogenic activity also. (I) is also useful for inhibiting numan sperm. The peptides are also provided in the form of an expression vector comprising a nucleic acid encoding the peptides. The peptides are useful for inhibiting the activity of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present peptide corresponds to a generic formula for a cationic oligopeptide; the formula is (b-1-1-b)n, where b is a hydrophobic amino acid, 1 is a hydrophilic amino acid and n is at least 4. In this case, where b is Leu, 1 is Arg and n = 10, the oligopeptide forms an alphahelix which forms a stable complex with a nucleic acid. The complex is suitable for transferring nucleic acid, esp. in gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Complex of nucleic acid and oligopeptide with sectransfer vectors contg. them, useful for efficient nucleic acid to cells in gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel peptides having antimicrobial activity have positive charge to selectively disrupt microbial membranes, assume beta sheet structure membrane environment and are substantially amphipathic in beta sheet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2001-565322/63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-FEB-2000; 2000US-0182495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15-FEB-2001; 2001WO-US04822.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Antimicrobial; microbial membrane disrupter; gene therapy; spermicide; imaging; magainin; PGla.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAG65539 standard; peptide; 18
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                                                                                                                                                                                                                                                                                                                                                                           Example 102; Page
                                                                                                                                                                                                                                                                                                                                                                                                                                       structure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23-AUG-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
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Pred. No. 0.00
18; Mismatches
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Best Local (
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          bacteria, and other microbial pathogens such as algae, fungi or protozoa and for inhibiting non-microbial pathogens such as worms or arthropods, and as spermicides for humans as the sperm membrane is atypical of human cell membranes. (I) also has diagnostic uses e.g., in localizing an infection or detecting sepsis. The peptides may act as binding molecules and are useful to purify a target from blood, for qualitative or quantitative analysis of analytes in in vitro sample, and for in vivo imaging. Also, they are useful as molecular weight markers, as nutrient source, as growth medium component for culturing microorganisms, as well as food ingredient for human consumption. The peptides have a greater selectivity for bacterial versus mammalian lipids as compared to the alpha helical peptides. Sequences AAG65536-47 represent amino acid
                                                                                                                                                                                                                                                                                                                                                              Region
                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                        n-protamine;
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                                                                                                                                                                              08-MAY-1995;
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                                                                                                                                                                                                                                  14-NOV-1996.
                                                                                                                                                                                                                                                                                                                       Binding-site
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Coagulation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Protamine-like peptide analogue [+18RGD]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAW06684;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAW06684 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sequences of antimicrobial peptides.
                                                                                                    WPI; 1997-011697/01
                                                                                                                            Andrews
                                                                                                                                                                                                                                                          WO9635444-A1
                                                                                                                                                                                                                                                                                                 Modified-site
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8; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  anticoagulant; heparin; platelet aggregation; cell adhesion;
narged cluster; arginine; polycationic; decrease;
                                                                                                                           Stanley JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                         salmine
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34..36
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                                                                                                                                                                                                                                                                                                                                                                                                                                                        luster; arginine; polycationic; decrease;
protamine; protamine sulphate; salmon sperm.
                                                                                                                                                                                                                                                                                                                                    repeat_region
4 tandem repe
                                                                                                                            Wakefield
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                                                                                                                                                                                                                                                                                                                                      repeats of (Arg)2(Ala)2(Arg)2Ala motif"
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Protamine sulphate (also called n-protamine or salmine a polycationic peptide derived from salmon sperm and is

protamine) s used to

Page 31; 42pp; English.

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anticoagulant effects of hepariner positive charges for reduced to

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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 2000000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Title:
Perfect score:
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Gapop 10.0 , Gapext 0.5
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162
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(without alignments)
123.607 Million cell updates/sec
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

| Lytic peptide used | AAR92436 | 17 | 27 | 35.2 | 57 | 10 |
|--------------------|----------|----|--------------------------|-------|-------|--------|
| Porcine somatotrop | AAW05116 | 17 | 17 | 35.8 | 58 | 9 |
| Antimicrobial pept | AAY32703 | 20 | 28 | 36.4 | 59 | 8 |
| Antimicrobial pept | AAW47769 | 19 | 28 | 36.4 | 59 | 7 |
| Amino acid sequenc | AAP91336 | 10 | 28 | 38.9 | 63 | σ |
| Synthetic antimicr | AAR80735 | 16 | 31 | 39.5 | 64 | ហ |
| Antimicrobial pept | AAR60065 | 15 | 31 | 39.5 | 64 | 4. |
| Protamine-like pep | AAW06684 | 18 | 39 | 40.7 | 66 | ω |
| Peptide sequence u | AAG65539 | 22 | 18 | 41.4 | 67 | N |
| Alpha-helix-formin | AAR84926 | 16 | 40 | 47.2 | 76.5 | _ |
| Description | ID | DB | Query Match Length DB | Query | Score | Result |

| 45 | 44 | | | | 40 | | | | 36 | | | | | | | | | | | | | | 22 | | | | 18 | | | | | | | |
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| 54 | 54 | 54 | 54 | 54 | უ 4 | 54 | 54 | 54 | 54 | 54 | ъ 4 | 5 4 | 54 | 5 4 | 54 | 54 | 54.5 | 54.5 | 55 | 55 | 53 55 | 55 | 55 | 55 | ភ | 56.5 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 |
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| ω u | 33 | 33 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 217 | 96 | 704 | 412 | 28 | 28 | 27 | 27 | 21 | 105 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 27 |
| 16 | 16 | 16 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 19 | 19 | 19 | | | | | | | | | | | | 17 | 20 | 18 | 19 | 17 | 17 | 16 | 16 | 16 | 16 | 17 |
| AAR74716 | AAR77067 | AAR84153 | AAY32572 | AAY32569 | AAY32564 | AAY32559 | AAY32590 | AAY32587 | AAY32592 | 63 | σ | AAW47628 | AAW47657 | AAW47655 | AAW47652 | AAW47623 | ABB66985 | AAW25793 | AAR05096 | AAR05095 | AAY32563 | AAW47627 | AAR89992 | AAR92435 | AAY30017 | AAW25792 | AAW39765 | AAR90748 | AAR92394 | AAR64792 | AAR74713 | Ø. | 15 | AAR89993 |
| Tryptic digestion | Synthetic anti-neo | Peptide enhancer o | obial | Antimicrobial pept | Antimicrobial pept | _ | ۳ | Antimicrobial pept | | Н | Ч | Antimicrobial pept | Antimicrobial pept | Antimicrobial pept | | Antimicrobial pept | melanc | Leishmania major S | PSD302.PEP HIV-1 g | | Antimicrobial pept | Antimicrobial pept | Synthetic lytic pe | Lytic peptide used | Buforin II-derived | Leishmania major S | Synthetic lysine-r | ς. | Lytic peptide used | Amphipathic peptid | Tryptic digestion | Synthetic anti-neo | ĸ | Synthetic lytic pe |

ALIGNMENTS

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RESULT 1
AAR84926
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                                                                                                                                                                                                                                     08-FEB-1994;
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                                                                                                                                                                                                                                                                                                                                                                                                                                   11-AUG-1995.
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    pref. 10-50"
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RX MEDLINE=20196006; PubMed=10731132;
A Adams M.D., Celniker S.E., Li P.W., Hoskins R.A., Galle R.F.,
A Adams M.D., Celniker S.E., Li P.W., Hoskins R.A., Galle R.F.,
A Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
A Manatides P.G., Scherer S.E., Richards S., Ashburner M., Henderson S.N.,
Suton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
A Barnadon R.C., Bayer B.G., Helt G., Nelson C.R., Miklos G.L.G.,
A Abril J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,
A Abril J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,
A Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
A Ballew R.M., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
A Borkova D., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
A Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
A Dodson K., Doug L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
A Durbin K.J., Evangelista C.C., Ferraz C., Ferriera S., Fleischmann W.,
A Fosler C., Gabrielian A.E., Garg N.S., Gelbart M.M., Glasser K.,
A Hostin D., Houston K.A., Howland T.J., Wei M.-H., Ibegwam C.,
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01-DEC-2001
01-DEC-2001
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TT virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Drosophila melanogaster (Fruit fly).

Bukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;

Rterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;

Ephydroidea; Drosophilidae; Drosophila.
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FAU OR CG6544.
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01-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN-BERKELEY;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          multiple tissues from infected humans.", Virology 288:358-368(2001).
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PF02956; TT_ORF1; 1.
NCE 759 AA; 89860 MW; 5879DFD71A37010D CRC64;
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0; Mismatches
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STRAIN-AV19 / DSM 6324 / JCM 9639;

MEDLINE=21927647; PubMed=11930014;

MEDLINE=21927647; PubMed=11930014;

Slesarev A.I., Mezhevaya K.V., Makarova K.S., Polushin N.N.,

Shcherbinina O.V., Shakhova V.V., Belova G.I., Aravind L.,

Matale D.A., Rogozin I.B., Tatusov R.L., Wolf Y.I., Stetter K.O.,

Malykh A.G., Koonin E.V., Tatusov R.L., Wolf Y.I., Stetter K.O.,

Malykh A.G., Koonin E.V., Poperthermophile Methanopyrus kandleri AV19

and monophyly of archaeal methanogens.";

Proc. Natl. Acad. Sci. U.S.A. 99:4644-4649(2002).
                                                                                                                                                                         Isomerase;
SEQUENCE
                                                                                                                                                                                                                  Proc. Natl. Acad. Sci. U.S.A. EMBL; AE010381; AAM02134.1; -.
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EMBL; AE003688; AAF54549.1; -.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Methanopyrus kandleri.
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217 AA; 24284 |
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                                                                                                                               STRAIN=FRIEDLIN;
MEDLINE=97237563; PubMed=9084041;
MEDLINE=97237563; PubMed=9084041;
Noll T. Desponds C. Jacquet R., Belli S., Fasel N.J.;
Noll, C. Desponds, R. Jacquet, S. Belli and N. J. Fasel.
H1 expression varies during Leishmania majordevelopment.";
Mol. Biochem. Parasitol. 84:215-227(1997).
EMBL; AJ223861; CAA11592.1; -.
EMBL; AJ223861; CAA11591.1; -.
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01-MAY-2000
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Fasel N.J., Roby
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
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Bukaryota; Euglenozoa; Kinetoplastida;
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Submitted
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Eukaryota; Euglenozoa;
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L., U01031, AAA18635.1; -.
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histone H1-like gene ex
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Pred. No. 6;
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                                                                         6 variant A and B.";
J. Virol. 0:0-0(1999).
EMBL; AB021506; BBA78318.1; --
EMBL; AB021506; BAA78211.1; --
SEQUENCE 115 AA; 13818 MW;
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STRAIN=AV19 / DSM 6324 /
                                                                                                                                                                      Sunagawa T., Sashihara
"A comparison of the co
                                                                                                                                                                                        Isegawa Y., Mukai T., Nakano K., K
Sunagawa T., Sashihara J., Zou P.,
                                                                                                                                                                                                                                                                                                       Viruses; dsDNA viruses,
Betaherpesvirinae; Rose
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                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                              Human herpesvirus
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l Similarity 36.4%;
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, Kosuge H., Yamanishi K.
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01-MAY-2000
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01-JUN-2001
01-JUN-2001
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SEQUENCE FROM N.A.
STRAIN=CV. COLUMBIA;
MEDLINE=20083487; PubMed=10617197;
MEDLINE=20083487; Rounsley S.D., Shea
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                                                                                                                                                                     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core e eurosids II; Brassicales; Brassicaceae; Arabidopsis.
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AT2G06420.
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InterPro; IPR004219; TTvirus_Unk.
Pfam; PF02956; TT_ORF1; 1.
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DNA Res. 7:331-338(2000).
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Kaneko T., Nakamu:
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A., Kawashima K., Kimura
, Matsumoto M., Matsuno I
        T.P.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fujii C.Y., Mason T.M., Bowman C.L., Barnstead M.E., Feldblyum T.V., Buell C.R., Ketchum K.A., Lee J.J., Ronning C.M., Koo H., Moffat K.S., Cronin L.A., Shen M., Vanhken S.E., Umayam L., Tallon L.J., Gill J.E., Adams M.D., Carrera A.J., Creasy T.H., Goodman H.M., Somerville C.R., Copenhaver G.P., Preuss D., Nierman W.C., White O., Eisen J.A., Salzberg S.L., Fraser C.M., Venter J.C.; "Sequence and analysis of chromosome 2 of the plant Arabidopsis"
                                                                                                                                                                                                   Virology 286:168-181(2001).

EMBL; AF377959; ARX59217.1; -.
EMBL; AF377959; PARC9217.1; -.
InterPro; IPR000328; Env GP41.
InterPro; IPR000777; GP120.
                                                                                                                                                                                                                                                                                                                                     MEDLINE=Z1342588; PubMed=11448170;
MEDLINE=Z1342588; PubMed=11448170;
Carr J.K., Torimiro J.N., Wolfe N.D.,
Sanders-Buell E., Jagodzinski L.L., G
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EMBL; AC006918; AAM15311.1; -.
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Lin X., Kaul S., Shea T.P.,
M R., Mason T.M.,
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b H., Moffat K.S.,
n L.J., Gill J.E.,
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"Characterization of phil3, a bacteriophage containing three dsRNA genomic segments."; 
Virology 775:218-224 (2000).

EMBL; AF261667; AAG00439.1; -.
EMBL; AF261667; AAG00439.1; -.
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MEDIANE=99119503; PubMed=9918888; Reddy P.S., Chen Y., Idamakanti N. "Characterization of early region Virology:253:299-308(1999).
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Baxi M.K., Reddy P.S., Zakhartchouk A.B
Babiuk L.A., Tikoo S.K.;
"Characterization of bovine adenovirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pyne C., Babiuk L.A., Tikoo S.K.;
"Nucleotide sequence, genome organization,
bovine adenovirus type 3.";
J. Virol. 72:1394-1402(1998).
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Mindich L., Qiao X., Qiao J., Onodera
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NCBI_TaxID=134554;
                                                                                                                                            Lee J.B., Baxi M.K., Idamakanti N
Pyne C., Babiuk L.A., Tikoo S.K.;
"Genetic organization and DNA seqn
adenovirus type 3.";
Virus Genes 17:99-100(1998).
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MEDLINE=98451815; PubMed=9778793;
MEDLINE=98451815; PubMed=9778793;
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                       .A., Tikoo S.K.; adenovirus-3.";
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rel. 18, C rel. 18, L rel. 20, L mll6891.

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Hypothetical MLL6891.

protein

Bacteria; Proteobacteria; Phyllobacteriaceae; Mesorl

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alpha subdivision;

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Rhizobium loti (Mesorhizobium

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Submitted (OCT-1997) to the EMBL/GenBank/DDBJ
EMBL; AF030154; AAD09724.1; ...
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SEQUENCE FROM N.A.
STRAIN=WBR-1;
                                                                                                      Proc. Natl. Acad. Sci. U.S.A. EMBL; AE010352; AAM01800.1; -
                                                                                                                                              Slesarev A.I., Mezhevaya K.V., Makarova K.S., Polushin Shcherbinina O.V., Shakhova V.V., Belova G.I., Aravind Natale D.A., Rogozin I.B., Tatusov R.L., Wolf Y.I., Stemalykh A.G., Koonin E.V., Kozyavkin S.A.,
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STRAIN=AV19 / DSM 6324 / JCM 9639;
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NCBI_TaxID=2320;
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                                                                                                                "The complete genome of hyperthermophile Methanopyrus and monophyly of archaeal methanogens."; Proc. Natl. Acad. Sci. U.S.A. 99:4644-4649(2002).
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Q25305 leishmania
Q9tvi8 leishmania
Q8txa5 methanopyru
Q9w9g8 human herpe
Q91cz2 tt virus. o
Q9vgx3 drosophila
Q8tww0 methanopyru
Q95s18 drosophila
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O987v7 rhizobium 1
O99ar5 tt virus. o
O9shx2 arabidopsis
O90cg7 human immun
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Q9fzt7 pseudomonas
Q71097 bovine aden
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Q94ML3 Q94ML3; 01-DEC-2001

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19,

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Membrane protein P6.

bacteriophage phi-12. Viruses; dsRNA viruses;

Cystoviridae; Cystovirus

NCBI_TaxID=161736;

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| 32.1 | 32.1 | 32.1 | 32.1 | 32.1 | 32.1 | 32.4 | 32.4 | 32.7 | 32.7 | 32.7 | 32.7 | 32.7 | 32.7 | 32.7 | 32.7 | 32.7 | 32.7 | 32.7 | 32.7 | 33.3 | ນ ພ | 33.3 | 33.3 | 33.3 | 3 3 3 | 33.6 | 33.6 | 33.6 |
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01-MAR-2001 (TrEMBLrel. 16, C
01-MAR-2001 (TrEMBLrel. 16, L
01-OCT-2001 (TrEMBLrel. 18, L
                                                                                                                                                                                                                 SEQUENCE FROM N.A.

Gottlieb P., Wei H., Toporovsky I.;

"Nucleotide sequence of the middle dsRNA segment of Phi-12.";

Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.

EMBL; AY039807; AAK74123.1; -.

SEQUENCE 242 AA; 25478 MW; 8F6676077899AFE0 CRC64;
Pseudomonas bacteriophage phi-13.
                      Membrane
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X MEDLINE=20020109; PubMed=11756688;

X MEDLINE=20020109; PubMed=11756688;

X DelVecchio V.G., Kapatral V., Redkar R.J., Patra G., Mujer C., Los T.,

RA Ivanova N., Anderson I., Bhattacharyya A., Lykidis A., Reznik G.,

RA Ivanova N., Anderson I., Bhattacharyya A., Lykidis A., Reznik G.,

RA Ivanova N., Anderson I., Bhattacharyya A., Lykidis A., Reznik G.,

RA Ivanova N., Anderson I., Bhattacharyya A., Lykidis A., Reznik G.,

RA Ivanova N., Anderson I., Bhattacharyya A., Lykidis A., Reznik G.,

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RA Ivanova N., Anderson I., Bhattacharya A., Mazur M., Goltsman E.,

RA Ivanova N., Anderson I., Bhattacharya A., Lykidis A., Reznik G.,

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RA Ivanova N., Anderson I., Bhattacharya A., Lykidis A., Reznik G.,

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RA Ivanova N., Anderson I., Bhattacharya A., Lykidis A., Reznik G.,

RA Ivanova N., Anderson I., Bhattacharya A., Lykidis A., Reznik G.,

RA Ivanova N., Anderson I., Bhattacharya A., Lykidis A., Reznik G.,

RA Ivanova N., Anderson I., Bhattacharya A., Lykidis A., Reznik G.,

RA Ivanova N., Anderson I., Bhattacharya A., Lykidis A., Reznik G.,

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Q8YIV5;
15-JUN-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Complete proteome.
NP_BIND 59
SEQUENCE 346 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          entities requires a license agreement (S or send an email to license@isb-sib.ch).
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DNA repair; SOS response; ATP-binding; DNA recombination; Helicase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR003593; AAA ATPase centr.
InterPro; IPR003959; AAA ATPase centr.
InterPro; IPR00405; RuvB.
Pfam, PF00004; AAA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; AE009475; AAL51515.1; -.
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-!- SUBUNIT: Forms a complex with ruvA (By similarity).
-!- SIMILARITY: BELONGS TO THE RUVB FAMILY.
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15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Holliday junction DNA helicase ruvB.
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les 15; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                38268 MW; F97710688F919FBC CRC64;
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                                      2003, 11:56:38
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RA Fritz C., Fujita M., Fujita Y., Fuma S., Galizzi A., Galleron N.,
RA Ghim S.Y., Glaser P., Goffeau A., Golightly E.J., Grandi G.,
RA Guiseppi G., Guy B.J., Haga K., Haiech J., Harwood C.R., Henaut A.,
RA Guiseppi G., Guy B.J., Haga K., Haiech J., Harwood C.R., Henaut A.,
RA Joris B., Karamata D., Kasahara Y., Klaerr-Blanchard M., Klein C.,
RA Joris B., Koetter P., Koningstein G., Krogh S., Kumano M.,
RA Kobayashi Y., Koetter P., Koningstein G., Krogh S., Kumano M.,
RA Kurita K., Lapidus A., Lardinois S., Lauber J., Lazarevic V.,
RA Lee S.M., Levine A., Liu H., Masuda S., Mauel C., Medigue C.,
RA Medina N., Mellado R.P., Mizuno M., Moestl D., Nakai S., Noback M.,
RA Parro V., Pohl T.M., Ogawa K., Ogiwara A., Oudega B., Park S.H.,
RA Parro V., Pohl T.M., Portetelle D., Porwollik S., Prescott A.M.,
RA Parescan E., Pujic P., Purnelle B., Rapport G., Rey M., Reynolds S.,
RA Rieger M., Rivolta C., Rocha E., Roche B., Rose M., Sadaie Y.,
RA Sato T., Scanlan E., Schleich S., Schroeter R., Scoffone P.,
RA Sekiguchi J., Sekowaka A., Seror S.J., Serror P., Shin B.S., Soldo B.,
RA Takeuchi M., Tamakoshi A., Tanaka T., Terpstra P., Tognoni A.,
RA Viari A., Wambutt R., Wedler E., Wedler H., Weitzenegger T.,
RA Viari A., Wambutt R., Wedler E., Wedler H., Weitzenegger T.,
Tabtilia "."
The complete genome sequence of the Gram-positive bacterium Bacillus
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Best Local S
Matches 10
                                                             13-AUG-1987 (Rel. 05, Created)
01-FEB-1996 (Rel. 33, Last sequence update)
15-JUL-1999 (Rel. 38, Last amoutation update)
Envelope polyprotein GP160 precursor [Contains:
glycoprotein (GP120); Transmembrane glycoprotein
                                                                                                     ENV HV1H3
P04624;
13-AUG-1987
01-FEB-1996
15-JUL-1999
Envelope pol
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-i- CATALYTIC ACTIVITY: ATP + uridine = ADP + UMP.
-i- CATALYTIC ACTIVITY: ATP + cytidine = ADP + CMP.
-i- CATALYTIC ACTIVITY: ATP + cytidine = ADP + CMP.
-i- PATHWAY: Pyrimidine salvage pathway.
-i- SUBCELLULAR LOCATION: Cytoplasmic (By similarity).
-i- SIMILARITY: BELONGS TO THE URIDINE KINASE FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Transferase; Kinase; ATP-binding; Complete proteome. NP_BIND 12 19 ATP (POTENTIAL). SEQUENCE 211 AA; 24487 MW; 6BCF031D88C984C4 CRC6
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PRINTS; PR00988; URIDINKINASE.
TIGRFAM8; TIGR00235; udk; 1.
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Human immunodeficiency virus type 1 (HXB3 isolate) Viruses; Retroid viruses; Retroviridae; Lentivirus NCBI_TaxID=11707;
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InterPro; IPR000764; Uridine
Pfam; PF00485; PRK; 1.
                                                                                                                                                                                                                                                                                                                        138
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10; Conser
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                                                                                                                                                                                                               STANDARD;
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                                                                                   glycoprotein
                                              (HXB3 isolate) (HIV-1).
                                                                                                            Exterior membrane
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Pfam; PF00517; GP41; 1.
AIDS; Coat protein; Poly!
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Crowl R., Ganguly K., Gordon M., Conroy R., Schaber
Shaw G.M., Wong-Staal F., Reddy E.P.;
"HTLV-III env gene products synthesized in E. coli
antibodies present in the sera of AIDS patients.";
Cell 41:979-986(1985).
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                                               Polyprotein; Glycoprotein; Transmembrane;
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Query Match Best Local Matches

Similarity 9; Conserv

Conservative

9

Mismatches No.

10;

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Gaps

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Length 856,

Pred. Score

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  Query Match
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Matches 17
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Best Local
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01-FEB-1994
                                                                                                                                                                                                                                    EMBL; X71335; CAA50475.1; -. PIR; S33338; S33338. Protamine_P2. InterPro; IPR000492; Protamine_P2.
                                                                                                                                                                                                                                                                                                                                                                                    between the Swiss Institute of Bioinformatiche European Bioinformatics Institute. These by non-profit institutions as long a modified and this statement is not removed.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Retief J.D., Dixon G.H., "Evolution of pro-protamine P2 genes Eur. J. Biochem. 214:609-615(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-FEB-1994
15-JUN-2002
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                                                                                                   SEQUENCE
                                                                                                                                                                 Pfam; PF00841; protamine P2; 1. Chromosomal protein; Nucleosome core; Spermatogenesis; Testis; DNA condensation; Nuclear protein.
                                                                                                                                                                                                                                                                                                                                  or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                entities requires a license agreement
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=94109373; PubMed=8281927;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ERRATUM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=93292525; PubMed=8513810;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9503;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alouatta seniculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chromosomal protein; Nucleosome core; Spermatogenesis; Testis; DNA condensation; Nuclear protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; D63796; BAA09865.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alouatta.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ief J.D., Dixon G.H.;
J. Biochem. 218:1095-1095(1993).
J. Biochem. 218:1095-1095(1993).
FUNCTION: PROTAMINES SUBSTITUTE FOR HISTONES IN THE CHROMATIN OF SPERM DURING THE HAPLOID PHASE OF SPERMATOGENESIS. THEY COMPACT SPERM DNA INTO A HIGHLY CONDENSED, STABLE AND INACTIVE COMPLEX. SUBCELLULAR LOCATION: NUCLEAR.
SUBCELLULAR LOCATION: NUCLEAR.
TISSUE SPECIFICITY: TESTIS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ALOSE
  Similarity
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17; Conser
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              32 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (Rel. 28, Created)
(Rel. 28, Last sec
(Rel. 41, Last and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (Howler monkey).
; Chordata; Craniata; Vertebrata; Euteleostomi;
; Primates; Platyrrhini; Cebidae; Alouattinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4220 MW;
                                                                                                   12560
                        31.5%;
                                                                                              MW;
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Score 51; DB Pred. No. 3.1; 0; Mismatches
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                                                                                              SPERM HISTONE P2.
; CBF579527B9ECA84 CRC64;
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Pred. No. 0
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                                                                                                                                                                                                                                                                                                                                                              (See http://www.isb-sib.ch/announce/
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                                               Length 100;
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RESULT
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                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local &
                                                                                                                                                                                                                                                                     OLT 13
BACSU
         Kunst F., Ogasawara N., Moszer I., Albertini A.M., Alloni G., Azevedo V., Bertero M.G., Bessieres P., Bolotin A., Borochert S., Boursiser L., Brans A., Brann M., Brignell S.C., Broni Brouillet S., Bruschi C.V., Caldwell B., Capuano V., Carter N.M., Choi S.K., Codani J.J., Connerton I.F., Cumnings N.J., Daniel R.A.
                                                                                                                                                                                        30-MAY-2000 (Rel. 39, Created)
30-MAY-2000 (Rel. 39, Last sequence update)
15-UN-2002 (Rel. 41, Last annotation update)
Uridine kinase (EC 2.7.1.48) (Uridine monophosphokinase)
                                                                                                                                                                                                                                            URK_BAC
032033;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a celebrate the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and formatical statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADEB2
                                                                                                                                        Bacillus subtilis.
Bacteria; Firmicutes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rusvai M., Harrach B., Banrevi A., Evans P., Benko M.; Submitted (OCT-1996) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VCO7_ADEB2
Q96624;
                                                                                          STRAIN=168;
                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-NOV-1997
16-OCT-2001
                                                                            MEDLINE=98044033; PubMed=9384377;
                                                                                                                                                                             monophosphokinase).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROPEP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=114429;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bovine adenovirus type 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Major core
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR004912; Adeno
Pfam; PF03228; Adeno_VII;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Viruses;
                                                                                                                                                                                                                                                          BACSU
                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein; Late protein.
3P 1 23
N 24 183
N 23 24
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Codani J.J., Connerton, Devine K.M., Dusterhof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein precursor (Protein
                                                                                                                                                                                                                                                                                                                                                                                                                          183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (Rel. 35, Created)
(Rel. 35, Last sequence up
(Rel. 40, Last annotation
                                                                                                                                                                                                                                                                                                                                                                        Conservative
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                                                                                                                                                                                                                                                          STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                                    31.5%;
                                                                                                                                          Bacillales;
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  Dusterhoft
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                                                                                                                                                                                                                                                                                                                                                                                    Score 51;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  MAJOR CORE PROTEIN.
CLEAVAGE (BY ADENOVIRUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                       (POTENTIAL)
                                                                                                                                                                                                                                                        PRT;
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                                                                                                                                          Bacillaceae; Bacillus
  Α.,
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VII) (p
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                     5.6;
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ng as its content is in
  Ehrlich
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                                                                                                                                                                                                                                                                                                                                                                                                 183
 Emmerson P.T.,
                                                                                                                                                                                            (Cytidine
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RESULT 8
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BAFFFB 2000XX
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Best Local
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                                                                     NADA METTH
027855;
15-JUN-2002
15-JUN-2002
15-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rhizobium sp. (strain NGR234).
Plasmid sym pNGR234a.
Bacteria; Proteobacteria; alpha
                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                             PROSITE; PS00397; RECOMBINASES 1; 1.
PROSITE; PS00398; RECOMBINASES 2; 1.
Hypothetical protein; DNA recombination;
                                                                                                                                                                                                                                                                                                                                                                                                 entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nature 387:394-401(1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rhizobiaceae; Rhizobium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rhizobium sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Probable
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15-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-NOV-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P55389;
      Methanobacteriaceae;
NCBI_TaxID=187420;
                            Methanobacterium thermoautotrophicum.
Archaea; Euryarchaeota; Methanobacteria; Methanobacteriales;
                                                                                                                                                                                                                                                                                                                                                                             EMBL; AE000068; AAB92422.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Molecular basis of symbiosis between Rhizobium and legumes.";
                                                                                                                                                                                                                                                                                                                                          ASSP; P03012; 2RSL.
InterPro; IPR001822; Recombinase.
Pfam; PF00239; resolvase; 1.
                                                  NADA OR MTH1827
                                                               Quinolinate
                                                                                                                                                                                                                                                                                        invertase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FAMILY.
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(Rel. 41, Last
(Rel. 41, Last
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                                                            synthetase
                                                                                                                                                                                                                Conservative
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                                                                                                                                                                                                                                                                                        Plasmid.
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                                                                                                                STANDARD;
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41,
                                                                                                                                                                                                                                                          34277 MW;
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, e Y4CG.
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Mismatches
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                                                                     update)
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RA Aldredge T., Bashizzadeh R., Blakely D., Cook R., Gilbert R.,

RA Spaddafora R., Vicare R., Wang Y., Wierzbowski J., Gibson R.,

RA Jiwani N., Caruso A., Bush D., Safer H., Patwell D., Prabhakar S.,

RA McDougall S., Shimer G., Goyal A., Pietrovski S., Church G.M.,

RA Daniels C.J., Mao J.-I., Rice P., Noelling J., Reeve J.N.,

"Complete genome sequence of Methanobacterium thermoautotrophicum

RT deltaH: functional analysis and comparative genomics.";

RJ. Bacteriol. 179:7135-7155(1997).

C. -!- FUNCTION: Catalyzes the condensation of iminoaspartate with

CC dihydroxyacetone phosphate to form quinolinate (By similarity).

C. -!- FUNCTION: Catalyzes the condensation of wann; second step.

C. -!- SIMILARION: Oytoplasmic (By similarity).

C. -!- SIMILARION: Oytoplasmic (By similarity).

C. SIMILARITY: BELONGS TO THE QUINOLINATE SYNTHETASE A FAMILY.
                                                           Query Match
Best Local S
Matches 11
                                                                                                                           Pyridine nucleotide SEQUENCE 304 AA;
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STRAIN=Delta H;
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281
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VVTVPDEIARRARRAVERMIRV 302
                            VVRVVRRVVRRVRRVVRV 29
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34393 MW; B5C
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NCBI TaxID=8090;
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15-JUN-2002
15-JUN-2002
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Q91185;
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STRAIN-Orange-red, TISSUE-Testis;
Tamura M., Yamamoto H., Onitake K.;
"Cloning of protamine cDNA of the medaka expression during spermatogenesis.";
Dev. Growth Differ. 36:419-425(1994).
This SWISS-PROT entry is copyright. between the Swiss Institute of Bioi
                                                                                                                     -i- FUNCTION: PROTAMINES SUBSTITUTE FOR HISTONES IN THE CHROMATIN O SPERM DURING THE HAPLOID PHASE OF SPERMATOGENESIS. THEY COMPACT SPERM DUA INTO A HIGHLY CONDENSED, STABLE AND INACTIVE COMPLEX.
-i- SUBCELLULAR LOCATION: Nuclear.
-i- TISSUE SPECIFICITY: Testis.
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Matches 14
                                                                                                                                                                    SPECIES—C.pallasii;

SPECIES—C.pallasii;

MEDLINE-71157437; PubMed-5551645;

Iwai K., Nakahara C., Ando T.;

"Studies on protamines. XV. The complete amino acid sequence of the component of clupeine. Application of N leads to O acyl rearrangemen and selective hydrolysis in sequence determination.";

J. Biochem. 69:493-509(1971).
                                                                                                                                                                                                                                                                                                                                                                                                                                                      21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
Protamine Z (Clupeine Z).
Clupea pallasii (Pacific herring), and
Clupea parengus (Atlantic herring).
Eukaryota; Metazoa; Chordata; Craniata; Vertel
Actinopterygii; Neopterygii; Teleostei; Clupe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Okamoto Y., Muta E., Ota S.;

"Primary structures of M6 and M7. of mugiline beta (Mugil japonicus)."

J. Biochem. 101:1017-1024(1987).

-i- FUNCTION: PROTAMINES SUBSTITUTE FOR HISTONES IN THE CHROMATIN OF SPERM DURING THE HAPLOID PHASE OF SPERMATOGENESIS. THEY COMPACT SPERM DNA INTO A HIGHLY CONDENSED, STABLE AND INACTIVE COMPLEX.

-i- SUBCELLAULAR LOCATION: Nuclear.

-i- TISSUE SPECIFICITY: TESTIS.

-i- MISCELLANEOUS: THE SEQUENCE OF COMPONENT M6 IS SHOWN.
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P08130;
                                                                 SPECIES=C.harengus;
Chang W.J., Nukushina
Submitted (AUG-1970)
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Protamine M6/M7 (Mugiline beta).
Mugil cephalus (Flathead mullet) (Mugil japonicus).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Actinopterygii; Neopterygii; Percomorpha; Mugilomorpha; Mugilidae;
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NCBI_TaxID=48193;
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16-OCT-2001
  MEDLINE=921
                    K-RAY CRYSTALLOGRAPHY
                                                                                                                                                SEQUENCE.
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Clupeomorpha; Clupeidae;
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Q9YD25;
30-MAY-2000
PROSITE; PS01144; RIBOSOMAL L31E; FALSE NEG Ribosomal protein; Complete proteome.

SEQUENCE 105 AA; 12527 MW; 7E5DF7999E74
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-!- TISSUE SPECIFICITY: TESTIS.
-!- MISCELLANEOUS: CLUPEINE Z IS PROBABLY THE RESULT OF .
BETWEEN THE GENES FOR CLUPEINES YI AND YII.
PIR; A02678; CLHRZ.
PIR; A37576; CLHRZA.
PDB; 7INS; 31-JAN-94.
Chromosomal protein; Nucleosome core; Spermatogenesis; DCHRSTIS; DNA condensation; Nuclear protein; 3D-structure.
SEQUENCE 31 AA; 4165 MW; 092CCBF7F3AFC050 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                           crenarchaeon, Aeropyrum pernix Kl.";
DNA Res. 6:83-101(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Yamazaki J., Kushida N., Oguchi A., Aoki K.-I., Kubota K.,
Nakamura Y., Nomura N., Sako Y., Kikuchi H.;
"Complete genome sequence of an aerobic hyper-thermophilic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kawarabayasi Y., Hino Y., Horikawa H., Yamazaki S., Haikawa Jin-no K., Takahashi M., Sekihe M., Baba S., I, Ankai A., K
Hosoyama A., Fukui S., Nagai Y., Nishijima K., Nakazawa H.,
Takamiya M., Masuda S., Funahashi T., Tanaka T., Kudoh Y.,
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"Structure of porcine insulin cocrystallized with clupeine Z.";
"Structure of porcine insulin cocrystallized with clupeine Z.";
Acta Crystallogr. B 47:975-986
                                                                                            Pfam;
                                                                                                                                            EMBL; AP000060; BAA80072.1; -.
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                                                                                                                  InterPro; IPR000054; Ribosomal_L31e.
                                                                                                                                                                                                                                                                                                                                                                                                   -1- SIMILARITY: BELONGS TO THE L31E FAMILY OF RIBOSOMAL PROTEINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=K1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=56636;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Desulfurococcaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Archaea; Crenarchaeota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Aeropyrum pernix.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SPERM DURING THE HAPLOID PHASE OF SPERMATOGENESIS. THEY SPERM DNA INTO A HIGHLY CONDENSED, STABLE AND INACTIVE (
                                                                                          PF01198; Ribosomal_L31e;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    w
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19; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PubMed=10382966;
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0; Mismatches
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Pred. No. 0.
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               7E5DF7999E74A098
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                                                                                                                                                                                                                                                                      There are no rest
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               CRC64;
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ai A., Kosugi
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STRAIN=C-
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Clupea harengus (Atlantic herring),
Clupea harengus (Atlantic herri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collab between the Swiss Institute of Bioinformatics and the EMBL outst the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for com
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=20512582; PubMed=11058132;
Takami H., Nakasone K., Takaki Y.,
Fuji F., Hirama C., Nakamura Y., O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             use by non-profit institumodified and this statement entities requires a license
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SEQUENCE
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                             SEQUENCE.
SPECIES=C.harengus;
Chang W.J., Nukushina
Submitted (AUG-1970) t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence up
15-DEC-1998 (Rel. 37, Last annotation
Protamine YII (Clupeine YII)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; AP001511; BAB04994.1; -.
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                                                                                                                                                                                        J. Biochem. 7
                                                                                                                                                                                                                                                                                 Suzuki K., Ando T
                                                                                                                                                                                                                                                                                                        SPECIES=C.pallasii;
MEDLINE=73223106; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TIGRFAMs; TIGR00235; udk; 1.
                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE.
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InterPro; IPR000764; Uridine_kin.
                                                                                                                                                                                                                                                "Studies on protamines. XVI.
   FUNCTION:
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'S; PR00478; PHRIBLKINASE.
'S; PR00988; URIDINKINASE.
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      PROTAMINES
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                                                                                                                                                                                                                                                                                                                     PubMed=4664740;
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a M., Ishii S., Nakahara C.,
to the PIR data bank.
INES SUBSTITUTE FOR HISTONES
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Pred. No. 1.6;
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Ogasawara N.,
                                                                                                                                                                                                                                                      complete
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VCO7_A
                                                                                                                            EMBL; 119443; AAC13963.1; -. EMBL; M8665; AAA42526.1; -. InterPro; IPRO04912; Adeno_VII; 1.
                                                                                                                                                                                                                                                                 Pieniazek N.J., Slemenda S.B., Pieniazek D., Luftig R.B.; Submitted (FEB-1992) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chromosomal protein; Nucleosome core; Spe
Testis; DNA condensation; Nuclear protein
SEQUENCE 30 AA; 4049 MW; 7F9BBB80F3AD
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PIR; A37575; CLHR2A.
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                                                                                                                                                                                                     use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                    MEDLINE=94087748; PubMed=8263936; Davison A.J., Telford E.A., Watson M. Felford E.A., Watson M. "The DNA sequence of adenovirus type J. Mol. Biol. 234:1308-1316(1993).
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RESULT 5
PRTB_MUGCE

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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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OM protein - protein search, using sw model

Run on: June 9, 2003, 11:40:31; Search time 7.2766 Seconds (without alignments) 205.199 Million cell updates/sec

Title: Perfect score:

Sequence: US-10-079-075-6
162
1 VRRVVRRVVRRVVRRVVRRVVRRVVRRVVRR 36

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

Searched: 112892 seqs, 41476328 residues

Total number of hits satisfying chosen parameters: 112892

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : SwissProt_40:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result

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ALIGNMENTS

submitted to the EMBL Data Library, May 1999 A;Reference number: Z18806

A; Accession: T17699

Status: preliminary; translated from GB/EMBL/DDBJ

Gaps

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C;Accession: E84537
R;Lin, X.; Kaul, S.;
M; Koo, H.; Moffat,
euss, D.; Nierman, W.
Nature 402, 761-768,
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C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 02-Feb-2001 #sequence_revision 02-Feb-2001 #text_change 02-Feb-2001
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A;Experimental source: specific host Chlorella strain NC64A
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A;Residues: 1-1218 <STO>
*'Cross-references: GB:AE002093; NID:g4678213; PIDN:AAD26959.1; GSPDB:GN00139
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Search completed: June 9, 2003, 12:03:10 Job time: 15.9362 secs

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protamine (mugiline beta) M6 - Formosan gray mullet C;Species: Mugil japonicus (Formosan gray mullet) C;Date: 05-Jun-1988 #sequence_revision 05-Jun-1988 #text_change 23-Feb-1997 C;Accession: A26762 R;Okamoto, Y: Muta, E.; Ota, S. J. Biochem. 101, 1017-1024, 1987 A;Title: Primary structures of M6 and M7 of mugiline beta-(Mugil japonicus). A;Reference number: A91909; MUID:87279969; PMID:3301825 A;Accession: A26762 A;Accession: A26762 A;Accession: A26762 A;Molecule type: protamin A;Residues: 1-33 COKA-C;Superfamily: protamine Y2 C;Keywords: DNA binding; nucleus
                                                                                                                                                                                R;Lin, X.; Kaul, S.;
M.; Koo, H.; Moffat,
                                                                                                                                                                                                                                    hypothetical protein At2g05450 [imported] - Arabidopsis thallana (c;Species: Arabidopsis thallana (mouse-ear cress) (c;Date: 02-Feb-2001 #sequence_revision 02-Feb-2001 #text_change 02-Feb-2001
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C;Species: Mugil japonicus (Formosan gray mullet)
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A; Residues: 1-1153 <STO>
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                                                                                                                                         Nature 402, 761-768, 1999
                                                                                                                                                           euss, D.; Nierman, W.C.; White,
                                                                                                 ;Title: Sequence and analysis of chromosome;Reference number: A84420; MUID:20083487; PM
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    ;Cross-references:
                                                        Status: preliminary
                                                                                ;Accession: F84468
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Best Local Similarity
Matches 14; Conserv
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Keywords: DNA binding; nucleus
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A; Molecule type: protein
A; Residues: 1-31 < CHA>.
C; Comment: Clupeine Z is probably the result of a crossover be
C; Superfamily: protamine Y2
C; Keywords: chromosomal protein; DNA binding; spermatogenesis
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N;Alternate names: clupeine
N;Alternate names: clupea pallasii, Clupea harengus pallasi (Pacific herring)
C;Species: Clupea pallasii, Clupea harengus pallasi (Pacific herring)
C;Date: 12-Aug-1981 #sequence_revision 12-Aug-1981 #text_change 16-Feb-1997
C;Accession: A38053; A02678
R;Iwai, K.; Nakahara, C.; Ando, T.
J. Biochem. 69, 493-509, 1971
The committee amino acid sequence of the
              arginine-rich protein a209R - Chlorella virus C;Species: Chlorella virus BECV-1 C;Date: 15-Oct-1999 #sequence_revision 15-Oct-C;Accession: T17699
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                                                                                                                                                                                                                                                                                                                                                                                                                           R;Chang, W.J.; Nukushina, M.; Ishii, S.; Nakahara, submitted to the Atlas, August 1970
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Reference number: A; Accession: A38053
R;Graves, M.V.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protamine Z - Atlantic herring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C; Keywords: chromosomal protein;
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Etten, J.L.
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Pred. No. 71;
8; Mismatches
                                                                                                                                                                                                                                                Score 53.5;
Pred. No. 3;
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Pred. No. 3;
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                               15-Oct-1999 #text_change 15-Oct-1999
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A; Variety: strain HST
c;Date: 21-Jan-2000 #sequence revision 21-Jan-2000 #text_change 21-Jul-2000
C;Accession: T43950; T44057
R;Isegawa, Y; Mukai, T; Nakano, K; Kagawa, M; Chen, J; Mori, Y; Sunage J, Virol. 73, 8053-8063, 1999
A;Title: Comparison of the complete DNA sequences of human herpesvirus 6 val A;Reference number: Z22732; MUID:99412319; PMID:10482554
A;Accession: T43950
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CLHR2A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N; Alternate names: clupeine C; Species: Clupea pallasii,
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J. Biochem. 72, 1419-1432, 1972
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A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-115 <ISE>
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A;Accession: A37575
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Molecule type: protein Residues: 1-30 < CHA>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Species: Clupea harengus, Clupea hârengus harengus (Atlantic herring);Date: 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change 16-Feb-Accession: A37575; A02677
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                                                                                                                                                                                             Species: human herpesvirus
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Pred. No. 1.7;
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                                                                                                                                                                           R;Marrs, J.A.; Bouck, G.B.
J. Cell Biol. 118, 1465-1475, 1992
A;Title: The two major membrane skeletal proteins (articulins)
A;Reference number: A43417; MUID:92394973; PMID:1522117
                                                                                                                                                                                                                                                                    A;Molecule type: mRNA
A;Residues: 1-651 <BOU>
                                                                                                                                                                                                                                                                                                                          A;Reference number:
A;Accession: S24609
                                                                                                                                                              A;Accession: A43417
                                                                        Cross-references: EMBL:Z13962; NID:g18403; PID:g18404
                                                                                                                                                                                                                                                                                                     Status: preliminary
                                                                                                                                           ;Status: preliminary; not compared with conceptual translation
                                                    Query Match
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Local

Similarity

33.6%;

Score 54.5; Pred. No. 3

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2

Length

651;

9

Indels

9

Gaps

(NCBIP:113032)

of Euglena gracilis

defir

Library, June 1992

Conservative

8,

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R;Marrs, J.A.; Bouck, G.B.
J. Cell Biol. 118, 1465-1475, 1992
A;Title: The two major membrane skeletal proteins (articulins)
A;Reference number: A43417; MUID:92394973; PMID:1522117
A;Accession: B43417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     major membrane cytoskeletal protein articulin, 86K - Buglena gracilis C;Species: Euglena gracilis C;Species: Euglena gracilis C;Date: 20-Feb-1995 #sequence_revision 20-Feb-1995 #text_change 09-Sep-1997 C;Accession: B43417; S24610
C;Species: Euglena gracilis
C;Date: 20-Feb-1995 #sequence_revision 20-Feb-1995
C;Accession: S24609; A43417
                                                                                                                                                                                                                                                                                                                              A;Status: preliminary; not compared with conceptual translation A;Molecule type: mRNA A;Residues: 1-650 <MAR>
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A; Residues: 1-115 < IS2>
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A;Experimental source: strain HST; pop. variant B
                                                        cytoskeletal protein - Euglena
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Gene: LT1; RJ1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Experimental source:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Accession: T44057
                                                                                                                                                                                                                                                                                                              A;Cross-references: EMBL:Z13963; NID:g18405; PID:g18406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cross-references: EMBL:AB021506; Experimental source: strain HST;
                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                        Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
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                                                                                                                                                                                                                                                      33.6%;
                                                          gracilis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4.
                                                                                                                                                                                                                                                        Score 54.5;
Pred. No. 37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score
Pred.
                                                                                                                                                                                                                                      Pred. No. 37;
7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NID:g4995977; | pop. variant B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           No. 5
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                                                                                                                                                                                                                                                                        DB 2;
                                                                                                                                                          233
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2;
                    #text_change 01-Dec-2000
                                                                                                                                                                                                                                    9,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               51
                                                                                                                                                                                                                                                                        Length 650;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 115;
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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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                                                                                                                                                                                                                                 Total number of hits satisfying chosen parameters: .
                                                                                                                                                                                                                                                                                                                                   Scoring table:
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seq length: 2000000000
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PIR_73:*
1: pir1:*
2: pir2:*
3: pir3:*
                                                                                                                                                                                                                                                                                                                                     BLOSUM62
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162
                                                                                                                                                                                                                                                                         283224 segs, 96134422 residues
                                                                                                                                                                                                                                                                                                               Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                              9, 2003, 11:48:06; Search time 14.9362 Seconds (without alignments) 231.709 Million cell updates/sec
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No. is the number of results predicted by chance to have a
re greater than or equal to the score of the result being printed,
is derived by analysis of the total score distribution.

SUMMARIES

Result

| esult No. | Score | Query Match | Length | DB | ID | Description |
|--------------|-------|----------------|--------|-----|--------|--------------------|
| _ | 59.5 | 36.7 | 349 | וֹמ | C84477 | hypothetical prote |
| N | | 34.6 | 211 | N | C83809 | CO . |
| ω | ŗ | 4 | 30 | _ | CLHRY2 | e YII - |
| 4 | 55.5 | 34.3 | 30 | Ь | CLHR2A | YII - |
| U | 55.5 | 34.3 | 115 | N | T43950 | al pro |
| 0 | 54.5 | 33.6 | 650 | N | S24610 | н. |
| 7 | 54.5 | · | 651 | N | S24609 | cytoskeletal prote |
| 80 | 54 | 'n | 33 | N | A26762 | |
| 9 | 54 | 33.3 | 33 | N | B26762 | protamine (mugilin |
| 10 | 54 | ü | 1153 | N | F84468 | hypothetical prote |
| 11 | 53.5 | · | 31 | دبو | CLHRZ | 2 |
| 12 | 53.5 | • | 31 | Н | CLHRZA | |
| 13 | 5 | 32.7 | 114 | N | T17699 | arginine-rich prot |
| 14 | | | 728 | N | F84500 | |
| 15 | 53 | 32.7 | 1218 | N | E84537 | cal |
| 16 | 52.5 | | 105 | N | H72708 | a |
| 17 | 52 | 32.1 | 304 | N | C69111 | quinolinate synthe |
| 18 | 51.5 | ۲ | 34 | N | JN0582 | protamine (scombri |
| 19 | : | 31.8 | 170 | Ν | JT0588 | 1. |
| 20 | 51 | | . 32 | N | I51089 | protamine - Japane |
| 21 | 51 | ۳ | 100 | N | S33338 | protamine P2 - red |
| 22 | 51 | ۳ | 180 | N | F85355 | 7 |
| 23 | 51 | ۳ | 211 | N | G69728 | |
| 24 | 51 | ŗ | 233 | N | C95987 | probable two-compo |
| 25 | | | 313 | N | C72784 | hypothetical prote |
| 26 | 50.5 | 31.2 | 346 | N | AH3293 | holliday junction |
| 27 | 50 | 0 | 99 | Н | QSBPB7 | host specificity p |
| 28 | 50 | 30.9 | 240 | N | F82790 | œ |
| 29 | 50 | 30.9 | 451 | N | AE0831 | CDPdiacylglycerol- |
| | | | | | | |

A;Molecule type: DNA A;Residues: 1-211 <STO> A;Cross-references: GB:AP001511; GB:BA000004; NID:g10173727; PIDN:BAB04994.1; GSPDB:GN0 A;Experimental source: strain C-125

A; Status: preliminary

A; Accession: C83809

C; Superfamily: uridine kinase

Query Match Best Local Similarity

34.6%;

Score Pred.

No.

DB 2; 9;

Length 211;

Genetics:

R;Takami, H.; Nakasone, K.; Takaki, Y.; Maeno, G.; Sasaki, R.; Masui, N.; Fuji, F.; Hir Nucleic Acids Res. 28, 4317-4331, 2000
A;Tile: Complete genome sequence of the alkaliphilic bacterium Bacillus halodurans and A;Reference number: A83650; MUID:20512582; PMID:11058132

uridine kinase udk [imported] - Bacillus halodurans (strain C-125) C;Species: Bacillus halodurans C;Date: 01-Dc-2000 #sequence_revision 01-Dec-2000 #text_change 15-Jun-2001

C; Accession: C83809

| 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | ω | 32 | 31 | 30 |
|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49.5 | 49.5 | 49.5 | 49.5 | 49.5 | 50 | 50 | 50 | 50 |
| 30.2 | 30.2 | 30.2 | 30.2 | 30.2 | 30.2 | 30.2 | 30.6 | 30.6 | 30.6 | 30.6 | 30.6 | 30.9 | 30.9 | 30.9 | 30.9 |
| 379 | 297 | 266 | 255 | 184 | 170 | 166 | 3864 | 2712 | 829 | 814 | 763 | 452 | 452 | 452 | 452 |
| N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | _ |
| A41095 | H72530 | C90257 | T28054 | T13097 | S66125 | D87664 | D87757 | T30949 | E87757 | T30950 | T24367 | D91060 | B85905 | AG0397 | H65036 |
| GTP-binding regula | hypothetical prote | translation initia | hypothetical prote | probable minor tai | conserved hypothet | hypothetical prote | protein C44E4.la [| hypothetical prote | protein C44E4.1b [| hypothetical prote | hypothetical prote | CDPdiacylglycerol- | CDPdiacylglycerol- | CDPdiacylglycerol- | CDPdiacylglycerol- |

ALIGNMENTS

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R;Lin, X.; Kaul, S.; Rounsley, S.D.; Shea, T.P.; Benito, M.I.; Town, C.D.; Fujii, C.Y.; M.; Koo, H.; Moffat, K.S.; Cronin, L.A.; Shen, M.; VanAken, S.E.; Umayam, L.; Tallon, L. euss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, Nature 402, 761-768, 1999
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                                           S
                                                                                                                                                                                                A; Map position:
                                                                                                                                                                                                                    C;Genetics:
A;Gene: At2g06420
                                                                                                                                                                                                                                                                                          A; Molecule type: DNA
A; Residues: 1-349 <STO>
                                                                                                                                                                                                                                                                                                                                             A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                         A; Accession: C84477
                                                                                                                                                                                                                                                                                                                                                                                           A; Reference number: A84420;
                                                                                                                                                                                                                                                                                                                                                                                              A;Title: Sequence and analysis of chromosome 2 of the plant Arabidopsis thaliana A;Reference number: A84420; MUID:20083487; PMID:10617197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C; Accession: C84477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hypothetical protein At2g06420 [imported] - Arabidopsis thaliana
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 02-Feb-2001 #sequence_revision 02-Feb-2001 #text_change 02-Feb-2001
                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                        Cross-references:
                                                                                                                        Local
274 RRTKRRMVIRMRRMVIKRKMVIKRRIVSRKRRIKRK 309
                                              2 RRVVRR-VVRVVRRVVRRVVRRVVRRVVRRVVRR 36
                                                                                              Similarity
15; Conserv
                                                                                                 Conservative
                                                                                                                                                                                                                                                                     GB:AE002093; NID:g4646226; PIDN:AAD26890.1;
                                                                                                                   36.7%;
                                                                                              Score 59.5; DI
Pred. No. 5.8;
8; Mismatches
                                                                                                              .8;
                                                                                                                                               DB 2;
                                                                                                 12;
                                                                                                                                             Length 349;
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Best Local Similarity
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                                                                                                                                                      Sequence 55, Application US/08786748A Patent No. 5714577
                                                                                                                                                                                       -08-786-748A-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION APPLICANT: Ronald
                                                                                                                                        SENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 21 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/0:
FILING DATE: 26-JAN-1996
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: FastSEQ Version 2.0 CURRENT APPLICATION DATA: NS. 08/786,748A APPLICATION NUMBER: US.08/786,748A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 10112-0228
COMPUTER READABLE FORM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                             CORRESPONDENCE ADDRESS:
                                                                       APPLICANT: Mietzner, Timothy A.
FITLE OF INVENTION: NOVEL ANTIMICROBIAL PEPTIDES
                                                                                                     PPLICANT: Ronald, Montelaro C.
PPLICANT: Tencza, Sarah B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM CON OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STREET: 30 Roc
CITY: New York
STATE: New Yor
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                                                             MBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                               STRANDEDNESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TLE OF INVENTION:
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          TREET:
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New York
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           E: Brumbaugh, Graves,
30 Rockefeller Plaza
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                                                                                                                                                                                                                                                                                                                      Conservative
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Pred. No. 0.41;
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                              Donohue & Raymond
                                                                                                                                                                                                                                                                                                                                                 Length 21;
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Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 54, Appr-
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Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
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                                                     CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/7:
FILING DATE: 24-JAN-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                         COMPUTER: IBM Compatible
OPERATING SYSTEM: MS-DOS
SOFTWARE: FastSEO Version 2.0
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                    ZIP: 10112-0228
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/0 FILING DATE: 26-JAN-1996 ATTORNEY/AGENT INFORMATION:
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APPLICATION NUMBER: US
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MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                             STREET: 30 STREET: New York
                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
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CLASSIFICATION:
                                                                                                                               APPLICATION NUMBER: US/08/932,682 FILING DATE: 18-SEP-1997
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REGISTRATION NUMBER: 32
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE:
                                                                                                                                                                                                                                                              COUNTRY:
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               REFERENCE/DOCKET NUMBER:
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8; Conserv
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amino acid
                                         Rochelle K. Seide
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                                                                                                                                                                                                                                                                              New York
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                                                                                                                                                                                                                                                                 USA
                                                                                                                                                                                                                                                                                                          30 Rockefeller Plaza
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INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                    NOVEL ANTIMICROBIAL PEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       45.0%; Score 49;
47.1%; Pred. No.
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                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:

APPLICANT: Rao, Gururaj A.

APPLICANT: Zhong, Lingxiu

TITLE OF INVENTION: SYNTHETIC ANTIMICROBIAL PEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELECOMMUNICATION INFORMATION:
TELEPHONE: (515) 245-3594
TELEFAX: (515) 245-3634
INFORMATION FOR SEQ ID NO: 9:
                                                                                                MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
TOTAL NUMBER 125 (100 174)
                                                                                                                                                                       ZIP: 50131
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 31 amino acids
TYPE: amino acid
                              PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
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                                                 APPLICATION NUMBER: US/08/440,174A FILING DATE: 12-MAY-1995 CLASSIFICATION: 530
                                                                                                                                                                                                                                                       STREET: 7100 N. CITY: Johnston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
APPLICATION NUMBER: US 08/079,512 FILING DATE: 18-JUN-1993
                                                                                                                                                                                                                        COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: Microsoft Windows No. 5607914epad
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                                                                                                                                                                                                                                              Iowa
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                                                                                                                                                                                                                                                                            E: PIONEER HI-BRED INTERNATIONAL, 7100 N.W. 62nd Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            E: Pioneer Hi-Bred International, Inc
700 Capital Square, 400 Locust Street
                                                                                                                                                                                                                            USA
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SYSTEM: MS-DOS/Microsoft Windows
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Pred. No. 0.32;
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; MOLECULE TYPE: protein PCT-US95-00062-9
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PCT-US95-00062-9
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Matches
                  Query Match
Best Local
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INFORMATION FOR
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                                                                                                                                                                                                                                FILING DATE:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Yates, Michael E.; Sweeney, Patricia A.;
NAME: Roth, Michael J.; & Simon, Soma G.
                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: Microsoft Windows Notepad CURRENT APPLICATION DATA:
                                                                                                                                                        SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION: TELEPHONE: (515) 248-4800
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MEDIUM TYPE: Diskett
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ADDRESSEE: Pioneer Hi-Bred International, Inc
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                                                                                                         LENGTH: 31 amino acids
TYPE: amino acid
STRANDEDNESS: single
                 Local
                                                                                         TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
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                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
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TOPOLOGY: linear
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Similarity 41.7%;
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    Conservative
                                                                                    single
linear
                                                                                                                                                                    (515) 248-4844
OR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pioneer Hi-Bred International, Inc. VENTION: SYNTHETIC ANTIMICROBIAL PEPTIDES
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IBM Compatible
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               46.8%;
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               Pred.
                  Score 51;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 51;
Pred. No.
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                                DB 5;
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                                Length 31;
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; ORIGINAL SOURCE: SYNTHETIC
; IMMEDIATE SOURCE: SYNTHETIC
; PUBLICATION INFORMATION: NOT PREVIOUSLY PUBLISHED US-09-340-154-64
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Matches
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Matches 6; Conserv
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SEQ ID NO 64
LENGTH: 27
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CURRENT APPLICATION NUMBER: US/09/482,611B
CURRENT FILING DATE: 2000-01-14
PRIOR APPLICATION NUMBER: US 08/801,028
PRIOR FILING DATE: 1997-02-19
PRIOR APPLICATION NUMBER: US 08/279,472
PRIOR FILING DATE: 1994-07-22
APPLICATION NUMBER: PCT/US95/09338
FILING DATE: 21-JUL-1994
PRJOR APPLICATION DATA: 08/279,472
APPLICATION NUMBER: 08/279,472
APPLICATION NUMBER: 08/279,472
FILING DATE: 22-JUL-1994
INFORMATION FOR SEQ ID NO: 64:
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TITLE OF INVENTION: Ubiquitin-Lytic Peptide Fusion Gene Constructs,
TITLE OF INVENTION: Therefrom, and Methods of Making and Using Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Garbarino,
APPLICANT: Belknap,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
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ORGANISM: Artificial Sequence
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TITLE OF INVENTION:
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                                                                                                                                                                                                                                       SOFTWARE: WORDPERFECT 5.1+
CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          UBIQUITIN-LYTIC PEPTIDE FUSION GENE CONSTRUCTS, PROTEIN PRODUCTS DERIVING THEREFROM, METHODS OF MAKING AND USING THE SAME
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Pred. No. 0.21;
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PCT-US95-09339-64
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Best Local Similarity
                                                             Matches
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                                                                           Best Local Similarity
                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                       HYPOTHETICAL: NO
FRAGMENT TYPE: COMPLETE PEPT
ORIGINAL SOURCE: SYNTHETIC
IMMEDIATE SOURCE: SYNTHETIC
PUBLICATION INFORMATION: NOT
                                                                                                                                                                                                                                                                                                                                   FILING DATE: 21-JUL-1994
PRIOR APPLICATION DATE: 08/279,472
PRIOR DATE: 22-JUL-1994
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ORIGINAL SOURCE: SYNTHETIC
IMMEDIATE SOURCE: SYNTHETIC
PUBLICATION INFORMATION: NOT
                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 27
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CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                      MOLECULE TYPE:
DESCRIPTION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
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RKILKRIKKIVRKFIRIAILIKRK 26
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                                                                           47.7%; Score 52;
25.0%; Pred. No.
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                                                                                                                                                                                                                                                                                                                       64:
                                                                                                                                         NOT PREVIOUSLY PUBLISHED
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                                                             Mismatches
                                                                           0.21;
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; Sequence 9, Application ; Patent No. 5607914 ; GENERAL INFORMATION: APPLICANT: Rao, A. C TITLE OF INVENTION:

Gururaj; Zhong, Lingxiu SYNTHETIC ANTIMICROBIAL

PEPTIDES

RESULT 10 US-08-179-632-9

Application US/08179632

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RESULT 5
US-08-801-028-64
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Best Local :
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           PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/279,472
FILING DATE: JULY 22, 1994
APPLICATION NUMBER: 08/225,476
FILING DATE: 04-20-94
APPLICATION NUMBER: 08/225,476
FILING DATE: 04-08-94
APPLICATION NUMBER: 08/039,620
FILING DATE: 06-04-93
APPLICATION NUMBER: 08/148,491
FILING DATE: 11-08-93
APPLICATION NUMBER: 08/148,491
FILING DATE: 11-08-93
APPLICATION NUMBER: 08/148,491
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APPLICANT: JOAN GARBARINO
APPLICANT: JESSE M. JAYNES
APPLICANT: WILLIAM BELKNAP
TITLE OF INVENTION: UBIQUIT
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INFORMATION FOR SEQ ID NO:
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FRAGMENT TYPE: COMPLETE PEPTIDE
ORIGINAL SOURCE: SYNTHETIC
IMMEDIATE SOURCE: SYNTHETIC
PUBLICATION INFORMATION: NOT PREVIOUSLY PUBLISHED
                                                                                                                                                                                                                                                                                             COMPUTER: APPLE MACINTOSH
COMPUTER: APPLE MACINTOSH
OPERATING SYSTEM: MACINTOS
SOFTWARE: M.S. WORD 5.0
CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
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LENGTH: 27
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DESCRIPTION: PEPTIDE
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NAME: WALKER, BARBARA W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       y Match 47.7%; Score 52; DB 2; Length 27; Local Similarity 25.0%; Pred. No. 0.21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET: 200 PARK DRIVE, SUITE 210
STREET: P.O. BOX 14329
CITY: RESEARCH TRINGCLE PARK
STATE: NORTH CAROLINA
APPLICATION NUMBER:
                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/08/801,028 FILING DATE: 19-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                           MEDIUM TYPE: DISKETTE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE: STEVEN J. HULTQUIST
ADDRESSEE: INTELLECTUAL PROPERTY/TECHNOLOGY LAW
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RKILKRIKKIVRKFIRIAILIKRK 26
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  08/148,889
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US-09-340-154-64
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Patent No. 6084156
GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                              CLASSIFICATION:
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: 08/505,486
FILING DATE: 21-JUL-1995
APPLICATION NUMBER: U.S. 08/279,472
FILING DATE: 22-JUL-1994
ATTORNEY/AGENT INFORMATION:
                                                                       TELEFAX: (202)783-6031
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (919)990-953
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: WordPerfect 5.1+
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/3
                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: DISKETT
COMPUTER: IBM COMPAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HYPOTHETICAL: NO
FRAGMENT TYPE: COMPLETE PEPTIDE
ORIGINAL SOURCE: SYNTHETIC
IMMEDIATE SOURCE: SYNTHETIC
PUBLICATION INFORMATION: NOT PREVIOUSLY PUBLISHED
                                                          SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
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                                                                                                                              TELECOMMUNICATION INFORMATION:
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CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: LINEAR MOLECULE TYPE:
DESCRIPTION: PEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION:
LENGTH: 27
TYPE: AMINO ACID
TOPOLOGY: LINEAR
                                                                                                                                               NAME: WALKER, BARBARA W.
REGISTRATION NUMBER: 35,400
REFERENCE/DOCKET NUMBER: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZIP:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET:
                                                                                                             TELEPHONE:
                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                             OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Washington
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Jesse M. Jaynes
Jesse M. Jaynes
JENTION: UEIQUTIN-LYTIC PEPTIDE FUSION GENE
CONSTRUCTS, PROTEIN PRODUCTS DERIVING THEREFROM,
JENTION: METHODS OF MAKING AND USING SAME
                                                                                                                                                                                                                                                                                                                                                                                                                            E: DISKETTE, 3.
IBM COMPATIBLE
                                                                                                               (202) 783-6040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          47.7%; Score 52; DB 3 25.0%; Pred. No. 0.21;
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                                                                                                                                                                                                                                                                                                                                                                                                                                               3.5 INCH, 1.4 MB STORAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13; Mismatches
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US-08-436-703B-5
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                                                                                                                                                                                                                                                     Sequence 5,
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                                                                                                                                                                                                         GENERAL INFORMATION: APPLICANT: Wakefi
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                                                                                                                                                                                                                                          tent No. 591976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: N/A
FILING DATE: N/A
ATTORNEY/AGENT INFORMATION:
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CORRESPONDENCE ADDRESS:
ADDRESSEE: Benita J, Rohm, Esq.
STREET: 6601 Woodward Avenue
ADUM

GIREET: Suite

SIREET: Suite -

SIREET: Suite -

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ORIGINAL SOURCE:
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OPERATING SYSTEM: MS-DOS
SOFTWARE: WordPerfect 6;
SOFTWARE: ASCII (DOS) Text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/436,703B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk 1.44Mb, 3.5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PUBLICATION INFORMATION:
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                                                                                                             TITLE OF INVENTION:
                                                                             CORRESPONDENCE ADDRESS:
                                                                                                NUMBER OF SEQUENCES:
                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                          PPLICANT:
                                                                                                                                              ITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Rohm, Benita J.
REGISTRATION NUMBER: 28,664
REFERENCE/DOCKET NUMBER: 7W
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TITLE: N/A
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                                                              DDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                                                 12;
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                                                                                                                                                                                                                                                       Application US/08436703B
                               Suite 1525
                                             3: Benita J, Rohm, Esq
6601 Woodward Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    38 amino acids
                                                                                                                            Stanley, James C.
VENTION: NOVEL PEPTIDES FOR
VENTION: HEPARIN AND LOW MOLECULAR
VENTION: WEIGHT HEPARIN
                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
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                                                                                                                                                                                          Andrews,
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                                                                                                                                                                                                           Wakefield, Thomas W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N/A
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ANTICOAGULATION REVERSAL
                                                                                                             ANTICOAGULATION REVERSAL
                                                                                                                                                                                         Philip C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17:
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Pred. No. 0.16;
                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                              DB 2;
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Matches
                                                                                                                                                                                                                                                                                                                                                                                   Patent No. 5955573
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 64,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: peptide ORIGINAL SOURCE: ORGANISM: N/A PUBLICATION INFORMATION: AUTHORS: N/A TITLE: N/A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO:
                                                              SOFTWARE: WordPerfect 5.1+
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/505,486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS LENGTH: 39 amino acids
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SOFTWARE: ASCII (DOS) TO
CURRENT APPLICATION DATA:
               FILING DATE: 21-JUL-
CLASSIFICATION: 536
PRIOR APPLICATION DATA:
                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.4 MB STORAGE
                                                                                                                                                                                                               STREET: 555 CITY: Washington
                                                                                                                                                                                                                                                                                                                  APPLICANT: Jesse M. Jaynes
TITLE OF INVENTION: UNSIGNTIN-LYTIC PEPTIDE FUSION GENE
TITLE OF INVENTION: CONSTRUCTS, PROTEIN PRODUCTS DERIVING THEREFROM, AND
TITLE OF INVENTION: METHODS OF MAKING AND USING SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
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                                                                                               COMPUTER: IBM COMPATIBLE OPERATING SYSTEM: DOS SOFTWARE: WordPerfect 5.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
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TYPE: amino acid
STRANDEDNESS: N/A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Rohm, Benita J.
REGISTRATION NUMBER: 28,664
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                                                                                                                                                                                   ZIP: 20004
                                                                                                                                                                                                 COUNTRY:
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APPLICATION NUMBER:
                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        l Similarity
12; Conserv
                                                                                                                                                                                       D. USA
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                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/08505486
                                                                                                                                                                                                                                                    E: ROTHWELL, FIGG, ERNST & KURZ 555 Thirteenth Street N.W.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WordPerfect 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08-MAY-1995
                                               21-JUL-1995
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U.S. 08/279,472
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2;
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Result
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Maximum Match
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Maximum DB
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed,
                                                                                                                                                                                                                                                                                                                                                                               Score
                                                                                                                                                                                                                                                                                                                                                                                                                                              is derived
                                                                                                                                                                                                                                                                                                                                                    57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            seq length: 0 seq length: 2000000000
     protein search, using sw model
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Match
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    Issued_Patents_AA:*

1: /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
2: /cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
3: /cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
4: /cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
5: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
6: /cgn2_6/ptodata/1/iaa/backfiles1.pep:*
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Maximum Match 100%
Listing first 45 summaries
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US-09-413-814-78
US-08-436-703B-77
US-08-436-703B-64
US-08-801-028-64
US-09-340-154-64
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US-09-340-154-64
US-09-340-174A-9
PCT-US95-09339-64
US-08-179-632-9
US-08-786-748A-54
US-08-932-682-53
US-08-932-682-53
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US-08-801-028-65
US-09-340-154-65
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                                   Sequence 78, Appl
Sequence 57, Appl
Sequence 64, Appl
Sequence 9, Appl
Sequence 9, Appl
Sequence 9, Appl
Sequence 54, Appl
Sequence 55, Appl
Sequence 55, Appl
Sequence 55, Appl
Sequence 56, Appl
Sequence 57, Appl
Sequence 63, Appl
Sequence 67, Appl
Sequence 67, Appl
            Sequence
Sequence
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 Sequence
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RESULT 2 US-08-436-703B-17

Sequence 17, Application US/08436703B
PATENT NO. 5919761
GENERAL INFORMATION:
APPLICANT: Wakefield, Thomas W.
APPLICANT: Andrews, Philip C.
APPLICANT: Stanley, James C.
TITLE OF INVENTION: NOVEL PEPTIDES FOR
TITLE OF INVENTION: HEPARIN AND LOW MOLECULAR

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| | y Match Local : hes 1 | MGTH PE: GANI | NUMBER OF SOFTWARE: | EARLIER EARLIER | FILE RE | TITLE OF INVENTION: DNA sequences for TITLE OF INVENTION: heteropolyketide | APPLICANT: | APPLICANT: | APPLICANT: | APPLICANT: | APPLICANT: | រដូច | Sequence 7 Patent No. | 2 1 | | 0,, | | | - 0 | | , 7, | J. U. | | <i>.</i> | _ ` | <i>.</i> . | w |
| z | | 1 000 | JWU | | APPL | FINV | X X | NI: | NI: | | | Õ | _ 00 4 | l | | 46 | 4 4 | 46 | 4 4 | 47 | 47 | 47 | . 47 | 47 | 47 | 4 4 9 | 49 |
| RVVRI | Similarity 5; Conser | Sorangium 78 | 5 5 | . 75 | ICATI | INVENTION: | Mueller, Joa Reichenbach, | ofle, | Cino, Paul Dougherty, | Brandt, P | Beyer, Stefan | RMATION: Gesellschaft | , Applicati 5225064 | Ď | | 4 2 | 4 4 | 42 | 4 4 2 C | 43 | 44. | 4 4 | 43 | 43 | 43 | 4. 4. ru n | 4. Ui |
| VRRV | larity Conserva | | σ | " z " | ON N | N. E | nbac | Ger | Paul erty, | Pe | - 0- ∨ |)N: Lscha | cati | | | אוֹמ | s is | io i | S i | | ز نز د | <u>-</u> | μĻ | <u>س</u> د | į, č | ò | |
| | 52. 60. tive | cellu | 107 | 1998-10-07 NUMBER: DE 1998-10-09 | ERENCE: PCT/US 99/2 APPLICATION NUMBER: | DNA se | oachi h, Ha | Goldberg, Steven Hofle, Gerhard | M Brian | | ers o | ft fu | ion US/09413814 | | | 24 | 2 22 | 21 | 228 | 28 | 221 | 28 | 24 | رم د 4. د | 24 | 27 | 27 |
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| VRRV | 3; 34 | ům. | | 09 19 | 3535 US/09 | sequences ropolyket | | | | | , | Biot | 4138 | | | US- | 7 C | នូ | | 8 8 | 5 S | | US- | -Su | US-0 | PCI- | US- |
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| 2 4 | 57. No. | | | 5 493 | 3,814 | com | | | | | | nolo | | | ALIGNMENTS | ا ن | . 62.69. - 22.69. | 786- | 932- 786- | US-08-932-6 | -987 | 786- 786- | ν'n | າດ | 96 | 5-0 | 482- |
| | Score 57.5; I Pred. No. 1.2; ; Mismatches | | | 3.2 | 44 | compounds | | | | | | echnologische | | | NTS | 748A- | 283 | 7482 | 682- 7482 | -682-46 | 748A- | -748A- | 682-6 | 748A- | 748A- | 9338- | 611B |
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| | Gaps | | | | | polyketide | | | | | | | | | | 58, | 20, | 53, | 7 0 | 46, | 48 | 46, | 62, | 2,0 | 60, | 9 6 | 65, |
| | | | | | | le or | | | | | | | | | | App. | Appl | Appl | Appl | App1 | App | App1 | App1 | App1 | App1 | App | App |
| | 1, | | | | | 7 | | | | | | | | | | | | | | , , , | - | | , p | ب ۔ | - | <u>در</u> د | ₩ |

GENERAL INFORMATION:

Sequence 7, Application PC/TUS0204812

C. Montelaro

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US-09-785-059-7
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US-09-785-058-7
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Best Local Similarity
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 7
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID 0 7
                                                                                                                                                                                                                                           Sequence 7, Application US/09785059 GENERAL INFORMATION:
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                                                                         NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 7
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TITLE OF INVENTION: VIXUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-PCT / 072396.0223
CURRENT APPLICATION NUMBER: PCT/US02/04812
CURRENT FILING DATE: 2002-02-19
                                                                                                                            APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VLRUS DERIVED ANTIMICROBIAL PEPTIDES
PILE REPERINCE: A33577 / 072396.0217
CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILE REFERENCE: A 34001 / 072396.0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396,0222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne
                                                                                                                                                                                                         APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne
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ORGANISM: Artifical sequence
FEATURE:
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OTHER INFORMATION: Artificial peptide derived from HIV-1
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                 LENSTH: 42
TYPE: PRT
ORGANISM: Artifical sequence
FEATURE: 🦙
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                                                                                                                                                                                                                                                                                                                                                          Similarity
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APPLICANT: Timothy A. Mietzner
ITITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PER
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 7
LENGTH: 42
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; OTHER INFORMATION: Artificial peptide derived from HIV-1 US-09-785-059-7
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                                                                                                                                             ORGANISM: Artificial Sequence FEATURE:
                                                                                                                             OTHER INFORMATION: Artificial peptide derived from HIV-1
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                                                       24;
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                                                                      100.0%; Score 109; DB 2
100.0%; Pred. No. 8e-08;
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Pred. No. 8e-08;
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                                                                                                                                                                        Sequence 6, Application US/09785059

GENERAL INFORMATION:

APPLICANT: Ronald C. Montelaro

APPLICANT: Timothy A. Mietzner

TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
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Matches
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GENERAL INFORMATION:
APPLICANT: ROHALD C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A 34001 / 072396.0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
                                                          SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 6 LENGTH: 36
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Best Local
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                                                                                              FILE REFERENCE: A33577 / 072396.0217
CURRENT APPLICATION NUMBER: US/09/785,
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-PCT / 072396.0223
CURRENT APPLICATION NUMBER: PCT/US02/04812
CURRENT FLLING DATE: 2002-02-19
CURRENT FLLING DATE: 2002-02-19
CURRENT FLLING DATE: 2002-02-19
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Artifical FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: Artificial peptide derived from HIV-1
ORGANISM: Artifical sequence
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Pred. No. 6.7e-08;
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SEQ ID NO 7
LENGTH: 42
TYPE: PRT
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LENGTH: 36
TYPE: PRI
ORGANISM: Artificial Sequence
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Best Local Similarity
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE A34001-PCT / 072396.0223
CURRENT APPLICATION NUMBER: PCT/US02/04432
CURRENT FILING DATE: 2002-02-13
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TITLE OF INVENTION: VIRUS DERIND ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
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OTHER INFORMATION: Artificial peptide derived from
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                                                                              Score 109; DB 1
Pred. No. 8e-08;
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Pred. No. 6.7e-08;
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RESULT 12 PCT-US02-04812-7

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APPLICANT: Ronald C. Montele-
APPLICANT: Timort
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Best Local Similarity
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 5
LENGTH: 24
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LENGTH: 24
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SEQ ID NO 5
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CURRENT APPLICATION NUMBER: PCT/US02/04812
CURRENT FILING DATE: 2002-02-19
                                                                                           APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
CURRENT APPLICATION NUMBER: US/99/785,059
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
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                                                                                CURRENT FILING DATE:
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ORGANISM: Artificial Sequence
TYPE: PRT
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Pred. No. 4.2e-08;
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; OTHER INFORMATION: Artificial peptide derived from US-09-785-059-5
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LENGTH: 24
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Best Local Similarity
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CURRENT APPLICATION NUMBER: PCT/US02/04432
CURRENT FILING DATE: 2002-02-13
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
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CURRENT FILING DATE: 2002-02-19
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ITLE OF INVENTION: VIBUS DERIVED ANTIMICROBIAL PEPTIDES
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Pred. No. 4.2e-08;
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Pred. No. 4.2e-08;
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Pred. No. 6.7e-08;
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 2000000000
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Copyright (c) 1993 - 2003 Compus
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(cgn2_6/ptodata/1/paa/US06
(cgn2_6/ptodata/1/paa/US07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9, 2003, 11:55:47; Search time 103.915 Seconds (without alignments) 148.906 Million cell updates/sec
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m2_6/ptodata/1/paa/US083_COMB.pep:*
m2_6/ptodata/1/paa/US083_COMB.pep:*
m2_6/ptodata/1/paa/US085_COMB.pep:*
m2_6/ptodata/1/paa/US086_COMB.pep:*
m2_6/ptodata/1/paa/US086_COMB.pep:*
m2_6/ptodata/1/paa/US086_COMB.pep:*
m2_6/ptodata/1/paa/US089_COMB.pep:*
m2_6/ptodata/1/paa/US089_COMB.pep:*
m2_6/ptodata/1/paa/US099_COMB.pep:*
m2_6/ptodata/1/paa/US099_COMB.pep:*
m2_6/ptodata/1/paa/US092_COMB.pep:*
m2_6/ptodata/1/paa/US093_COMB.pep:*
m2_6/ptodata/1/paa/US093_COMB.pep:*
m2_6/ptodata/1/paa/US093_COMB.pep:*
m2_6/ptodata/1/paa/US095_COMB.pep:*
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/ptodata/1/paa/US080_COMB.pep:*
/ptodata/1/paa/US081_COMB.pep:*
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PCT-US02-04432-5

PCT-US02-04812-5

LUS-09-785-058-5

LUS-09-785-059-5

LUS-09-785-059-5

LUS-10-079-075-5

PCT-US02-04432-6
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Best Local S
Matches 24
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GENERAL INFORMATION:
APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-PCT / 072396.0223
CURRENT APPLICATION NUMBER: PCT/US02/04432
CURRENT FILING DATE: 2002-02-13
                                                                                                                                                                                                                NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 5
LENCTH: 24
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                             OTHER INFORMATION: Artificial peptide derived from HIV-1
                                                                                                                                                                                                    FEATURE:
                                                                           h 100.0%; Score 109; DB 1; Similarity . 100.0%; Pred. No. 4.2e-08; 24; Conservative 0; Mismatches 0;
                    24
                                                                                                                Length 24;
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RESULT 14
US-10-079-075-10
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US-09-785-059-10
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; OTHER INFORMATION: Artificial peptide derived from HIV-1
US-09-785-058-8
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ITITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID NO SEQ ID N
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US-09-785-059-10
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SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 10
LENGTH: 24
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                                                                                                                                                                        APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A (07.396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
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CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
                                                                         SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 10 LENGTH: 24
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
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ORGANISM: Artifical sequence
RGANIŚM: "Artificial Sequence
                                           PE: PRT.
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Similarity 100.0%;
24; Conservative 0
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Pred. No. 2.8e
0; Mismatches
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Pred. No. 7.9e-09;
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2.8e-06;
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Search completed: June Job time: 13.766 secs
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US-09-785-058-10
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                                                                                                                                                                     ; OTHER INFORMATION: US-09-785-058-10
                                                                                                                                                                                              SEQ ID NO 10
LENGTH: 24
TYPE: PRT
ORGANISM: Artifical sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                   Sequence 10, Application No. US20 GENERAL INFORMATION:
                                                                                                              Query Match
Best Local Similarity
Matches 21; Conserv
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Best Local Similarity 87.5%;
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                                                                                                                                                                                                                                                                 APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A 34001 / 072396.0222
CURRENT FILLING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
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                                                                                                                Conservative
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                                                                                                                                                                                      Artificial
             9, 2003, 12:34:09
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Pred. No.
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Pred. No. 2
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2.8e-06;
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; OTHER INFORMATION: Artificial peptide derived from HIV-1
US-10-079-075-7
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US-09-785-059-7
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SOFTWARE: FastSEQ for Windows Version
SEQ ID NO 7
                                                                                                        SOFTWARE: FASTSEQ for Windows Version 3.0 SEQ ID NO 7
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Best Local Similarity
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Best Local :
-09-785-058-7
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                                   APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
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CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
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                                                                                                                                              NUMBER OF SEQ ID NOS:
                                            TYPE: PRT
ORGANISM: Artifical sequence
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ORGANISM: Artifical
                                    FEATURE:
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             OTHER INFORMATION: Artificial peptide derived from HIV-1
                                                                                          LENGTH: 42
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US-09-785-059-8
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                                                                                                                                   OTHER INFORMATION: Artificial peptide derived from HIV-1
US-10-079-075-8
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US-09-785-059-8
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SOFTWARE: FastSEQ for
SEQ ID NO 8
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SOFTWARE: FastSEQ for Windows Version 3.0.
SEQ ID NO 8
LENGTH: 48
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Best Local :
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APPLICANT: 'Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A33577 / 072396.0217
CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
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                                                                                                                                                                    TYPE: PRT ORGANISM: Artificial Sequence FEATURE:
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ORGANISM: Artifical sequence
FEATURE:
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100.0%; Pred. No. 7.9e-09;
ative 0; Mismatches 0;
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RESULT 12 US-09-785-058-8

Sequence 8, Application US/09785058 Publication No. US20030036627A1

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                                                                      ; OTHER INFORMATION: Artificial peptide derived from HIV-1
US-09-785-059-6
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                                                                                                                                                          NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 6
LENGTH: 36
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Best Local Similarity
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A 34001 / 072396.0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                                                                              APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
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EQ ID NO 5
LENGTH: 24
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ORGANISM: Artificial Sequence
                                                                                                      TYPE: PRT
ORGANISM: Artifical sequence
FEATURE:
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100.0%; Score 109; DB 9; ilarity 100.0%; Pred. No. 5.7e-09; Conservative 0; Mismatches 0;
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Pred. No. 3.7e-09;
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Best Local S
Matches 24
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CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 6
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LENGTH: 36
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                                                     GENERAL INFORMATION:
                                                                   Sequence 7, Application US/09785059
Patent No. US20020169279A1
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072395.0222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne
APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 36
TYPE: PRT
ORGANISM: Artifical sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: Artificial peptide derived from
                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Artificial peptide derived from
                                                                                                                                                                                                                                                                                                                                                       FEATURE:
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                                                                                                                                                                                                                                                                100.0%;
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100.0%; Pred. No. 5.
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Pred. No. 5.7e-09;
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Result
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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                                                                                                                                                                                                                                                                                                                                                                                                                              id. No. is the number of results predicted by chance to have a breater than or equal to the score of the result being printed, is derived by analysis of the total score distribution.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /cgn2_6/ptodata/1/pubpaa/PCTUS_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*
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/cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
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Cgn2_6/ptodata/1/pubpaa/USO6_NEW_FUB.pep:*
Cgn2_6/ptodata/1/pubpaa/USO6_PUBCOMB.pep:*
Cgn2_6/ptodata/1/pubpaa/USO7_NEW_FUB.pep:*
Cgn2_6/ptodata/1/pubpaa/USO7_PUBCOMB.pep:*
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194.092 Million cell updates/sec
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US-09-785-059-10

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US-09-785-058-10

US-09-785-059-11
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US-09-785-058-5

US-09-785-059-6

US-10-079-075-6

US-09-785-058-6

US-09-785-059-7
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US-09-785-059-8
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US-09-785-059-5
                                                                                                                                                                    US-10-079-075-5
                                                                                                                                                                                    RESULT 2
                                                                                                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: Artificial peptide derived from HIV-1
US-09-785-059-5
                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 5
LENGTH: 24
TYPE: PRT
ORGANISM: Artifical sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                        Query Match
Best Local !
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 5, Application US/09785059
Patent No. US20020169279A1
                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT FILING DATE: 2001-02-16
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| 45 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | ω 5 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 |
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| 43.5 | 44 | 44 | 44 | 45 | 45 | 45 | 46 | 46 | . 46 | 47 | 47 | 47 | 49 | 49 | 54 | 54 | 54 | 55 | 55 | 55 | 56 | 56 | 56 | 88 | 88 |
| 39.9 | 40.4 | 40.4 | • | | ٠ | 41.3 | | 42.2 | ٠ | ٠ | | | • | • | | | | 50.5 | | | | | 51.4 | 80.7 | 80.7 |
| 96 | 29 | 18 | 18 | 31 | 31 | 31 | 999 | 997 | 70 | 12 | 12 | 12 | 18 | 18 | 12 | 12 | 12 | 28 | 28 | 28 | 31 | 3 1 | 31 | 48 | 48 |
| 9 | 9 | 9 | 9 | 9 | Ø | 9 | 5 | 9 | 10 | 9 | 9 | 9 | 10 | 10 | 9 | 9 | φ | 9 | 9 | φ | 9 | 9 | 9 | 9 | 9 |
| US-10-093-892-7 | | US-10-060-102-11 | US-10-060-102-10 | US-09-785-058-3 | US-10-079-075-3 | US-09-785-059-3 | US-09-747-371-2 | US-10-176-847-50 | US-09-764-877-1553 | US-09-785-058-9 | US-10-079-075-9 | US-09-785-059-9 | US-09-840-009-37 | US-09-840-009-36 | US-09-785-058-4 | US-10-079-075-4 | US-09-785-059-4 | US-09-785-058-1 | US-10-079-075-1 | 1 | US-09-785-058-2 | US-10-079-075-2 | US-09-785-059-2 | US-09-785-058-12 | US-10-079-075-12 |
| Sequence 7, Appli | 8 | 11, | 10, | u , | Sequence 3, Appli | 3 '≈ | Sequence 2, Appl | 50, App | Sequence 1553, A | Sequence 9, Appli | Sequence 9, Appli | Sequence 9, Appli | 37, | e 36, | Sequence 4, Appli | Sequence 4, Appli | Sequence 4, Appli | 1, Appl | Sequence 1, Appli | Sequence 1, Appli | Sequence 2, Appli | ν, | N | 12, | Sequence 12, Appl |

ALIGNMENTS

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Sequence 5, Application US/10079075
Publication No. US20020188102A1
GENERAL INFORMATION:
APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
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100.0%; Pred. No. 3.7e-09;
vative 0; Mismatches 0;
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RESULT 15
AAY32598
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Best Local Similarity
""" hes 8; Conserv
methicillin resistant S. aureus, Pseudomonas aruginosa, Entryoccus CC faecalis, S. marcescens, Escherichia coli, fungi, protozoa and viruses in examination host. They can be used to inhibit growth of diverse microorganisms such as bacteria, fungi, protozoa and DNA and RNA viruses and can be used in tissue culture to inhibit unwanted microbial growth, comparticularly for the production of recombinant proteins or vectors for gene therapy. They can also be used in preventing infections through the sterilisation of wounds prior to suture and to sterilise surgical construments. The unique structure of these antimicrobial peptides imparts high potency while selectivity is maintained, they are moderately haemolytic but only lyee red blood cells at high concentrations unlike melittin, a peptide extracted from bee venom, which is highly active against bacteria and lyses red blood cells showing it the selectivity. The peptides target a membrane structure which makes it more difficult for a microorganism to develop a mechanism of creasistance against this type of antibiotic. Their small size makes them constructed them the peptides target as the structure which was the peptides target as membrane structure which makes it more difficult for a microorganism to develop a mechanism of creasistance against this type of antibiotic. Their small size makes them
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present sequence the new peptides. It (see AAW47614) which of HIV strain HXB2R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26-JAN-1996;
24-JAN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Antimicrobial peptide; LLP1; SLP-1; LLP2; SLP2A; SLP2B; ELP; infection; growth inhibitor; microorganism; virus; gene therapy; vector production;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This sequence represents an antimicrobial peptide of the invention, is an analogue of the peptide LLP1 (see AAY32549). The peptides can used for treating infections caused by Staphylococcus aureus,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Column 10; 62pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Antimicrobial peptides useful for treating microbial infections
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (UYPI-) UNIV PITTSBURGH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6 RVRRVVRRVVRRVV 22
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            peptide LLP1 analogue.
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97US-0786748.
97US-0932682.
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Pred. No. 2.3;
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AAW47663
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CC applications designed to prevent disease in and spoilage of food crops.
CC Novispirin is useful in in vitro formulations to kill microbes, where the
CC use of conventional antibiotics is not desirable, e.g., novispirins may
CC be added to animal and/or human food preparations, and as an additive for
CC in vitro cultures of cells, to prevent the overgrowth of microbes in
CC tissue culture. Novispirin is also useful for killing non-bacterial
CC pathogens such as fungal and protozoan pathogens. The invention is useful
CC infection. The peptides are nonhaemolytic, exhibit reduced in vitro
CC cycotoxicity relative to other antimicrobial peptides and are well-
CC tolerated in vivo after intravenous injection. Novispirins are equally
CC effective against growing and stationary phase Pseudomonas aeruginosa and
CC they retain activity in the presence of high concentrations of salt or
CC human serum. Novispirins also bind lipopolysaccharide (LPS), a property
CC infection. The present sequence is R1, R2, G10-novispirin amide peptide.
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Matches 6
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Disclosure; Column 9; 59pp; English
                                                        Retroviral TM
                                                                                                                                                                                                                                                                          26-JAN-1996;
24-JAN-1997;
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amphipathic; antibacterial; antifungal; antiviral; antiprotozoal.
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                                                     peptides - useful as antibacterial
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97US-0786748
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The invention relates to new antimicrobial peptides which correspond to amino acid sequences in the transmembrane proteins of lentiviruses, in

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RESULT 14
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ID AAW47
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        amino acid sequences in the transmembrane proteins of lentiviruses, in particular HIV and SIV. These peptides comprise arginine rich sequences which, when modelled for secondary structure, display high amphipathicity and hydrophobic moment. Also disclosed are structural and functional analogues and homologues of these peptides which also display antimicrobial activity. The peptides are highly inhibitory to microorganisms (bacteria, fungi, viruses and protozoa) but significantly less toxic to red blood cells and other normal mammalian cells. Activity is demonstrated against Gram positive and negative bacteria including pseudomonas aeruginosa, Staphylococcus aureus, Enterococcus faecalis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              which, when modelled for secondary structure, display high amphipathicity and hydrophobic moment. Also disclosed are structural amphipathicity and hydrophobic moment. Also disclosed are highly inhibitory to display antimicrobial activity. The peptides are highly inhibitory to microorganisms (bacteria, fungi, viruses and protozoa) but significantly less toxic to red blood cells and other normal mammalian cells Activity is demonstrated against Gram positive and negative bacteria including pseudomonas aeruginosa, Staphylococcus aureus, Enterococcus faecalis and
                                                                                                                                                                 The invention relates to new antimicrobial peptides which correspond to amino acid sequences in the transmembrane proteins of lentiviruses, in
                                                                                                                                                                                                                      Disclosure; Column 9; 59pp; English
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24-JAN-1997;
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Serratia marcescens
                                                                                                                                                                                                                                                       Retroviral
                                                                                                                                                                                                                                                                                         WPI; 1998-158352/14.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human immunodeficiency virus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Antimicrobial peptide LLP1 analogue.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     particular HIV and SIV. These peptides comprise arginine rich sequences which, when modelled for secondary structure, display high
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AAE20888 ID AAE2 RESULT 11 Unidentified microbial infection; vulnerary; fungicide. P. aeruginosa; S. maltophilia; Chlamydia trachomatis; ophthalmological; nonhaemolytic; tissue culture; cystic fibrosis; ophthalmic instillation; burn; bacterial vaginosis; sexually transmitted disease; antibacterial; plant-pathogenic pseudomonad; agricultural application; protozoacide; 01-JUL-2002 WO200200839-A2 Novispirin; antimicrobial; therapy; gram negative bacteria; R1, R2, G10-novispirin peptide. AAE20888 standard; (first peptide; 18

infection;

28-JUN-2000; 2000US-0606858 19-APR-2001; 2001US-0840009 03-JAN-2002 13-JUN-2001; 2001WO-US19094

(REGC) UNIV IOWA. VIND CALIFORNIA.

RI, Waring AJ

New antimicrobial novispirin peptides, useful for treating microbial infections caused by Gram-negative bacteria such as Pseudomonas aeruginosa, Chlamydia trachomatis, Escherichia coli or Stenotrophomonas

Claim 4; Page 5; 42pp; English.

CC peptide) of a specific formula. Novispirin is useful for treating a comicrobial population comprising gram negative bacteria such as comicrobial population comprising gram negative bacteria such as comicrobial population comprising gram negative bacteria such as comicrobial population. CC Stenotrophomonas maltophilia on contact with the microbial population. CC screening novel antibiotics. Novispirin is useful for aerosol comic comprising novel antibiotics. Novispirin is useful for aerosol comic compression to lungs of patients with cystic fibrosis to treat compression to lungs of patients with cystic fibrosis to treat compression to the set of patients with serious burns; because of patients with indwelling catheters to prevent compression; application to the skin of patients with serious burns; compression; and intravaginal application to treat bacterial compression; and intravaginal application to treat bacterial compression with chlamydia trachomatis. The novispirins also find use in the treatment of plant-pathogenic pseudomonads, in agricultural complications designed to prevent disease in and spoilage of food crops. CC use of conventional antibiotics is not desirable, e.g., novispirins may be added to animal and/or human food preparations, and as an additive for tissue cultures of cells, to prevent the overgrowth of microbes in the suce of conventional antibiotics is not desirable, e.g., novispirins may be added to animal and/or human food preparations, and as an additive for tissue cultures of cells, to prevent the overgrowth of microbes in the suce of convention is useful for treating a host suffering from or predisposed to a microbial confection. The peptides are nonhamonlytic, exhibit reduced in vitro contacts and accompliant is useful and the peptides are nonhamonlytic, exhibit reduced in vitro contacts. invention relates to an antimicrobial polypeptide (novispirin

Stenotrophomonas maltophilia on contact with the microbial population. Novispirin mediated killing of microbes is also useful for modelling at screening novel antibiotics. Novispirin is useful for aerosol administration to lungs of patients with cystic fibrosis to treat infections caused by P. aeruginosa, S. maltophilia and to forestall the

The present invention relates to an antimicrobial polypeptide (novipeptide) of a specific formula your spirin is useful for treating a microbial population comprising gram negative bacteria such as Pseudomonas aeruginosa, Chlamydia trachomatis, Escherichia coli or

(novispirin

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and

Claim

4; Page 5; 42pp;

English

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RESULT 12
AAE20889
ID AAE20
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Matches
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                                                                                                                                                  New antimicrobial novispirin peptides, useful for treating microbial infections caused by Gram-negative bacteria such as Pseudomonas aeruginosa, Chlamydia trachomatis, Escherichia coli or Stenotrophomonas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Novispirin; antimicrobial; therapy; gram negative batteria; infection; P. aeruginosa; S. maltophilia; Chlamydia trachomatis; ophthalmological; nonhaemolytic; tissue culture; cystic fibrosis; ophthalmic instillation; burn; bacterial vaginosis; sexually transmitted disease; antibacterial;
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19-APR-2001; 2001US-0840009.
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Modified-site
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protozoacide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          aeruginosa and
s of salt or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ٥,
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RESULT 9
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Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present peptide is a buforin II-derived peptide. Antimicrobial peptides of the invention contain the sequence RLIR, repeated 1 to 6 times. The antimicrobial peptides of the invention contain an alpha-helix structure of buforin II. The peptides are insensitive to salt concentrations in potentiating the antimicrobial activity, unlike buforin and magainin. The peptides also have stronger antimicrobial activities than the whole proteins. The peptides have antimicrobial activities against a wide variety of microorganisms including Gram-negative and gram-positive bacteria, as well as fungi and protozoa.
        Synthetic polypeptide(s) and the nucleic acid encoding them - exhibits amphipathic alpha-helices and provide cell-expressable antimicrobial activity
                                                     WPI; 1994-249137/30
                                                                                                                         13-JAN-1993;
                                                                                                                                              12-JAN-1994;
                                                                                                                                                                      21-JUL-1994.
                                                                                                                                                                                           WO9415961-A
                                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                      crop protection.
                                                                                                                                                                                                                                                  Amphipathic peptide; alpha-helix; lytic peptide; antifungal; antimicrobial; fungus resistance; disease resistance;
                                                                                                                                                                                                                                                                                                           16-FEB-1995
                                                                                                                                                                                                                                                                                                                                 AAR60065
                                                                                                                                                                                                                                                                                                                                                       AAR60065 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-JUL-1999.
                                                                                                  (PION-)
                                                                                                                                                                                                                                                                                  Antimicrobial peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 1; Page 9; 26pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Buforin-derived antimicrobial peptides, useful against gram-negative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1999-458677/38.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hong S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (KIMS/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22-JAN-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  positive bacteria, fungi and
                                                                                                                                                                                                                                                                                                                                                                                                                                                          10;
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                                                                                                                                                                                                                                                                                                                                                                                                                                    2 RVVRRVRRVVRVVRVVR 19
                                                                                                  PIONEER HI-BRED INT INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
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SAMYANG GENEX CORP.
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                                                                          Zhong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                         (first entry)
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                                                                                                                       93US-0003884
                                                                                                                                             94WO-US00383.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     46.8%;
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Pred. No. 1.3;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protozoa
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 21;
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RESULT 10
AAR80735
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Query Match
Best Local S
Matches 10
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Best Local
                                                                                                             AAR80727-R80748 are new amphipathic polypeptides. They have a broad spectrum of antinicrobial and antifungal activity. They can be used to treat or prevent infection in humans and animals or applied to plants as sprays, creams, dust, etc. The DNA encoding these peptides can also be incorporated into susceptible plants via the use of a non-phytotoxic vehicle adapted for systemic administration. This process imparts resistance to plant pathogens esp. fungi (e.g. Fusarium graminareum, F.moliniforme, Aspergillus flavus, Alternaria longipes, Collectrichum graminicola, Phytophthora megasperme,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The synthetic ampipathic alpha-helical lytic peptides given in AAR60057-71 were designed to provide antifungal or antimicrobial activity when expressed in monocot or dicot plants. They also weterinary and medical applications.
                                                    Sequence
                                                                                         Sclerotinia sclerotonium). The peptides are esp. useful transformed plants such as maize, sorghum, wheat, soya,
                                                                                                                                                                                                                                                                                      New antimicrobial amphipathic polypeptide(s) and related nucleic acids - for clinical use or esp. to increase resistance of plants
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAR80735 standard;
                                                                                                                                                                                                                                                  Claim 1; Page 17; 24pp;
                                                                                                                                                                                                                                                                           to fungal
                                                                                                                                                                                                                                                                                                                                                       Rao AG,
                                                                                                                                                                                                                                                                                                                                                                                                          07-JAN-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                   06-JAN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              13-JUL-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           broad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Antimicrobial; antifungal; pathogen; plant; amphipathic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic antimicrobial/antifungal polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-FEB-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAR80735;
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                                                                           rapeseed,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9518855-A2
                                                                                                                                                                                                                                                                                                                                                                                  (PION-) PIONEER HI-BRED INT INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        spectrum
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             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
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                                                                           sunflower,
                                                                                                                                                                                                                                                                           pathogens.
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 Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                          94US-0179632
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           peptide;
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            46.8%;
                                                                             tobacco
                                                                                                                                                                                                                                                  English.
; Score 51; DB; Pred. No. 1.9; 6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             31
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Pred.
                                                                             or tomato
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            DB 16;
1.9;
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                         Length 31;
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 Indels
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Gaps
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RESULT 6
AAR92435
RESULT 7
AAR89992
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AC AAR8
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DT 16-S
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                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                               plants and animals) in the same way as the FP alone, they also promote wound healing. FPs produced in bacteria may be cleaved in vitro by ubiquitin hydrolases to recover the active lytic peptide. FPs produced in eukaryotic cells are cleaved by endogenous enzymes to yield lytic peptide. Recombinant DNA encoding the FPs have greater stability in bacteria than DNA encoding the lytic peptide
                                                                                                                                                                                                                                                                                                                                                                           AAR92372-R92462 are lytic peptides used to create ubiquitin-lytic peptide fusion proteins in which the ubiquitin polypeptide is linked at its 3'-terminus to the lytic peptide. The lytic peptides are pref. selected from either the cecropins, defensins, sarcotoxins, melittin and magainins. The fusion proteins (FPs) are useful for treating protozoal, bacterial, fungal and viral infections and neoplasia (in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAR92435 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (DEME-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ubiquitin; fusion protein; lysis; infection; neoplasia; wound healing; stability; reduced toxicity.
                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New fusion protein of ubiquitin and a lytic peptide - for treating infections and neoplasia, heating wounds, etc. also related nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Belknap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22-JUL-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24-JUL-1995;
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             Synthetic lytic peptide #26
                                       16-SEP-1996 (first entry)
                                                                                        AAR89992 standard; peptide; 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1996-117061/12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lytic peptide used in ubiquitin-lytic peptide fusion protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-SEP-1996
                                                                                                                                                                                                          Local Similarity
les 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>ت</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 vectors,
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                                                                                                                                                                                RRVVRRVRRVVRVVRVVRRVVRR 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Page 26; 112pp; English.
                                                                                                                                                      RKILKRIKKIVRKFIRIAILIKRK 26
                                                                                                                                                                                                                                                             27
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                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                             ₽,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and transformed cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             94US-0279472.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           peptide;
                                                                                                                                                                                                                      47.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Jaynes
                                                                                                                                                                                                          13;
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                                                                                                                                                                                                                      Score 52; I
Pred. No. 1.
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                                                                                                                                                                                                            Mismatches
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1.2;
                                                                                                                                                                                                                                   17;
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                                                                                                                                                                                                                                  Length 27
                                                                                                                                                                                                          0;
                                                                                                                                                                                                           Gaps
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Lytic peptide; ubiquitin; synthetic analogue; cell membrane; cell lysis; microbial pathogen; disease-resistant plant; bacterial infection; fungus; protozoa; virus; neoplasia; fusion protein; hydrolase.
Synthetic.
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WO9603522-A1

08-FEB-1996

95WO-US09338.

22-JUL-1994; 94US-0279472.

(DEME-) DEMETER BIOTECHNOLOGIES LTD

Jaynes

WPI; 1996-117064/12

Lytic peptide(s), useful for developing can be expressed as fusion protein with in bacterial host cells disease-resistant plants ubiquitin for stable prov prodn.

Claim 1; Page 81; 111pp; English

and other non-host cells by disrupting the cell membrane and promoting cell lysis. Synthetic lytic peptide analogues have similar or higher cell lysis. Synthetic lytic peptide analogues have similar or higher cell lysis of lytic activity for many different types of cells, compared to levels of lytic activity for many different types of cells, compared to naturally occurring forms. The concentration of the synthetic analogue required to lyse microbial pathogens does not lyse normal mammalian cells. The lytic peptides can be expressed in plants to allow for the development of disease-resistant plants. The peptides are useful in promoting wound healing and combatting bacterial infections in plants. The lytic peptides can also be used for combatting protozoal, fungal, viral or bacterial infections or neoplasias in mammals and plants. Lytic peptide-ubiquitin fusion proteins are suitable for production in bacterial hosts. Bacterial lack the hydrolase which cleaves the peptide will not be released in the host cells. The recombinantly produced lytic peptide can be retrieved from the fusion protein by cleavage in AAR89967-R90021 and AAR90726-R90763 represent synthetic analogues of naturally occurring lytic peptides. Lytic peptides destroy prokaryo

Sequence 27 Ä,

Query Match Best Local S Similarity 6; Conserv Conservative 47.7%; Scoré 52; DB Pred. No. 1.2; 13; Mismatches . 2 17; <u>ب</u> Length 27; Indels 0 Gaps

0

w RKILKRIKKIVRKFIRIAILIKRK 26

밁 S

1 RRVVRRVVRRVVRVVRRVVRR 24

AAY30017 AAY30017 standard; peptide; 21 Ą

AAY30017;

29-SEP-1999 (first entry)

Buforin II-derived antimicrobial peptide.

Buforin II; antimicrobial; alpha-helix; salt insensitive; magainin; gram-negative bacteria; gram-positive bacteria; fungi; protozoa.

Synthetic

WO9937664-A1

Best Loc Matches

Similarity 9; Conserv

Conservative

5 Pred.

Mismatches No.

0,

Indels

0,

Gaps

0.17;

64.3%;

Local

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RESULT 5
AAW06684
ID AAW0
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AC AAW0
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                                                                                                                                                              RESULT 4
AAR84926
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                                                                                                                      Matches
                                                                                                                                         Query Match
          AAW06684;
                                                                                                                                                                             The present peptide corresponds to a generic formula for a cationic oligopeptide; the formula is (b-1-1-b)n, where b is a hydrophobic amino acid, 1 is a hydrophilic amino acid and n is at least 4. In this case, where b is Leu, 1 is Arg and n = 10, the oligopeptide forms an alphahelix which forms a stable complex with a nucleic acid. The complex is suitable for transferring nucleic acid, esp. in gene therapy.
                            AAW06684 standard;
                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                     Claim
                                                                                                                                                                                                                                                                      Complex of nucleic acid and oligopeptide transfer vectors contg. them, useful for nucleic acid to cells in gene therapy.
                                                                                                                                                                                                                                                                                                                WPI; 1995-276981/37
                                                                                                                                                                                                                                                                                                                                                                                                08-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                        FR2715847-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alpha-helix;
DNA binding p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alpha-helix-forming oligopeptide (LRRL)10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-MAR-1996
                                                                                                                                                                                                                                                                                                                                     Bazile D,
                                                                                                                                                                                                                                                                                                                                                         (RHON ) RHONE
                                                                                                                                                                                                                                                                                                                                                                            08-FEB-1994;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAR84926 standard; peptide; 40
                                                                                                                                 Local
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                                                                                        1 RRVVRR-VRRVVRRVV-RVVRRVVRR 24
                                                                                                                      13;
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                                                                                                                                 Similarity
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                                                                                                                                                                                                                                                                                                                                    Emile C,
                                                                                                                                                             40 AA;
                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  secondary structure; nucleic acid transfer; cationic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                        POULENC RORER SA.
                                                                                                                                                                                                                                                                                                                                                                            94FR-0001381.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note= "repeat unit; must have
    pref. 10-50"
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                           peptide; 39
                                                                                                                               50.5%;
                                                                                                                                                                                                                                                                                                                                   Helene C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene therapy; encapsulation.
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                                                                                                                    Score 55; DB
Pred. No. 0.72
L1; Mismatches
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RRAARRAARRARRAARRARR 25 RRVVRRVRRVVRRVVRRVVR 23 Query Match
Best Local Similarity
Matches 12; Conser

Conservative

0;

11;

0,

Gaps

0

49.5%;

Score 54; I Pred. No. 0. Mismatches

DB 18; .95;

Length 39; Indels

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CC Protamine sulphate (also called n-protamine or salmine protamine) is
CC a polycationic peptide derived from salmon sperm and is used to
CC charge heparin anticoagulation. One of the major components of
CC charge of [+21], with arginine accounting for 67% of the total cationic
CC charge of [+21], with arginine accounting for 67% of the total sequence
CC and for all of the positive charge. Peptides of 20-40 amino acids with
CC total cationic charge less than [+21] and which are able, at least
CC partially, to reverse the effect of heparin and/or low molecular weight
CC partially, to reverse the effect of heparin and/or low molecular weight
CC partially, to reverse the effect of heparin expective charge on the
CC charge of less than [+21] and which are able, at least
CC partially, to reverse the effect of heparin where the positive charge on the
CC charge of less than [+21]. The new peptides are used in vivo
CC charged arginine residues with an uncharged residue, so that total
CC cationic charge is less than [+21]. The new peptides are used in vivo
CC to reverse the effects of heparin; they have the same anti-heparin
CC activity as protamine but are less toxic (because of the reduced
CC number of positive charges) and are relatively easy and inexpensive
CC to prepare. The present sequence represents a specifically claimed
CC protamine-like peptide with a charge of [+18], this peptide also
CC includes an RCD fibronectin receptor ligand motif. Peptide [+18RCD]
CC weight heparin Enoxaparin to 72%, compared to only 30% reversal by
CC rotamine. Also, peptide [+18RCD]
CC rotamine. Also, peptide [+18RCD]
CC rotamine.
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 31; Page 31; 42pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Peptide reversing the anticoagulant effects of heparin - is based protamine but has fewer positive charges for reduced toxicity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Coagulation; anticoagulant; heparin; platelet aggregation; cell adhesion; positively charged cluster; arginine; polycationic; decrease; n-protamine; salmine protamine; protamine sulphate; salmon sperm.
                                                            protamine.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1997-011697/01.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Andrews
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   08-MAY-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           08-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14-NOV-1996.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Binding-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Region
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Protamine-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   05-AUG-1997
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Modified-site
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Modified-site
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                                                          Also,
                                       n-protamine.
39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Stanley JC,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           peptide analogue [+18RGD].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           96WO-US06567
                                               noxaparin to 72%, compared to only 30% reversal by peptide [+18RGD] produced less decrease in platelet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /label= cell_adhesion_motif
39
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34..36
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as a beta sheet

8-50

amino

no acids, a net charge of 4, a hydrophobic moment (mie which is 0.2 higher than its micro H as alpha helix,

invention

provides

an

antimicrobial

compound (I) which is a peptide

(microH)

and

Example 102; Page 84; 119pp; English

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RESULT 2
AAP91336
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     useful for inhibiting non-microbial pathogenic activity also. (1) is also compared to the pathogenic activity also. (2) is also compared to the peptides are also provided in the peptides. The peptides are useful for inhibiting the activity of peptides. The peptides are useful for inhibiting the activity of and for inhibiting non-microbial pathogens such as algae, fungi or protozoa and for inhibiting non-microbial pathogens such as worms or arthropods, and as spermicides for humans as the sperm membrane is atypical of human cell membranes. (1) also has diagnostic uses e.g., in localizing an infection or detecting sepsis. The peptides may act as binding molecules and are useful to purify a target from blood, for qualitative or quantitative analysis of analytes in in vitro sample, and for in vivo imaging. Also, they are useful as molecular weight markers, as nutrient source, as growth medium component for culturing microorganisms, as well as a food ingredient for human consumption. The peptides have a greater selectivity for bacterial versus mammalian lipids as compared to the alpha helical peptides. Sequences AAG65536-47 represent amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                     Shiva-4; lytic peptide; antimicrobial peptide; disease-resistant trichophyte; Shiva-2; Shiva-3; Shiva-5; Shiva-6; Shiva-7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      having detectable membrane disrupting activity against a microbial pathogen, and substantially no membrane disrupting activity against mammalian cells. (I) is useful for inhibiting microbial activity. (
                                                                                                                                                                                                             02-NOV-1987;
                                                                                                                                                                                                                                           02-NOV-1988;
                                                                                                                                                                                                                                                                         18-MAY-1989.
                                                                                                                                                                                                                                                                                                        WO8904371-A
                                                                                                                                                                                                                                                                                                                                                                                  Amino acid sequence of Shiva-4.
                                                                                                                                                                                                                                                                                                                                                                                                                19-MAR-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                              AAP91336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAP91336 standard; peptide; 28 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          has a detectable membrane disrupting activity against a pathogen,
                                                                                                                   WPI; 1989-165650/22.
                                                                                                                                                   Jaynes
                                         Table I; ; 56pp; English.
                                                                                      Transformed
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                                                                      ed plants contg. I polypeptide high
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                                                                                                                                                 Derrick
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                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
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                                                                        heterolgous gene - «
h in essential amino
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Pred. No. (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
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0.022;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22; Length 18;
                                                                        expressing acids
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                                                                                      antimicrobial
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Amino acid sequence of Shiva-4 as an exemplary lytic peptide for use as an antimicrobial peptide contemplated for use in plant

Query Match

52.3%;

Score

57;

BB

17;

Length 17;

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RESULT 3
AAW05116
ID AAW0
XX
AC AAW0
XX
AC 19-J
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                                        New peptides are disclosed which, by virtue of having certain CC defined amino acids at every third or fourth residue, have a well defined secondary structure which mimics the helical conformation CC of a corresponding region of porcine somatotropin (pST). The peptides cenhance the activity of pST and promote the growth of warm-blooded CC animals, especially pigs. They compete with pST for binding to the CR 5-7.6 monoclonal antibody. The peptides have the generic sequence CC XXIXXIXXXIXXXXX (I) or XXXXXIXXXXXX (II); where residues X are CC undefined other than the statement that the sequences differ from the CC native sequence of pST. Formula (II) represents a peptide in which the CC location of the essential amino acids is shifted by three amino acids, representing almost one turn along the helix. Preferably X(2) of (II) is CC referably the peptides contain Ser (as a promoter of helical CC conformation) as the amino acid immediately amino-terminal to the first CC use in (I) or to the first IIe of (I) may be replaced by NIe. Furthermore, a CC restidue may be added to either or both ends of the peptides.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAW05116 standard; peptide; 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                expression levels.
Sequence
                                                                                                                                                                                                                                                                                                                                                Claim 3; Page 17; 63pp; English
                                                                                                                                                                                                                                                                                                                                                                             Peptide(s) mimicking a helical region of porcine somatotropin - used in compositions to promote mammalian growth
                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1996-485447/48
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Buckwalter BL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31-MAR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      03-OCT-1996.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9630405-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               porcine somatotropin; pST; growth promoter; helical conformation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Porcine somatotropin mimic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19-JUN-1997
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                              peptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (AMCY )
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   17
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   A,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   54.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score
Pred.
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OM protein -
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence:
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Pred. No. is the number of results predicted by chance score greater than or equal to the score of the result and is derived by analysis of the total score distribut
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seq length: 2000000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                           A Geneseq 101002:*

1: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1980.DAT:*
2: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1981.DAT:*
3: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1982.DAT:*
4: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1983.DAT:*
5: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1985.DAT:*
6: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1985.DAT:*
7: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1985.DAT:*
8: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1988.DAT:*
9: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1988.DAT:*
10: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1988.DAT:*
11: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1988.DAT:*
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                                                                                             /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1990.DAT:
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1991.DAT:
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1992.DAT:
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1992.DAT:
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| Synthetic lytic pe | AAR90746 | 17 | 27 | 42.2 | 46 | 45 |
| tide use | AAR92392 | 17 | 27 | 42.2 | 46 | 44 |
| athic p | AAR64790 | 16 | 27 | 42.2 | 46 | 43 |
| dig | AAR74711 | 16 | 27 | 42.2 | 46 | 42 |
| ic anti- | AAR77062 | 16 | 27 | N | 46 | 41 · |
| Peptide enhancer o | AAR84148 | 16 | . 27 | 42.2 | 46 | 40 |
| obial | AAY32602 | 20 | 24 | 42.2 | 46 | 39 |
| Antimicrobial pept | AAW47667 | 19 | 24 | 42.2 | 46 | 38 |
| Antimicrobial pept | AAY32597 | 20 | 21 | 42.2 | 46 | 37 |
| Antimicrobial pept | AAY32594 | 20 | 21 | 42.2 | 46 | 36 |
| Antimicrobial pept | AAW47659 | 19 | 21 | 42.2 | 46 | 35 |
| Antimicrobial pept | AAW47662 | 19 | 21 | 42.2 | 46 | 34 |
| m | AAY07735 | 20 | 516 | 43.1 | 47 | 33 |
| | AAY32590 | 20 | 28 | 43.1 | 47 | 32 |
| | AAY32587 | 20 | 28 | 43.1 | 47 | 31 |
| | AAY32592 | 20 | 28 | 43.1 | 47 | 30 |
| | AAW47657 | 19 | 28 | 43.1 | 47 | 29 |
| | AAW47655 | 19 | 28 | 43.1 | 47 | 28 |
| _ | AAW47652 | 19 | 28 | 43.1 | 47 | 27 |
| _ | AAY32606 | 20 | 24 | 43.1 | 47 | 26 |
| | AAY32604 | 20 | 24 | 43.1 | 47 | 25 |
| | AAW47671 | 19 | 24 | 43.1 | 47 | 24 |
| Antimicrobial pept | AAW47669 | 19 | 24 | 43.1 | 47 | 23 |
| | AAR89993 | 17 | 27 | 45.0 | 49 | 22 |
| Lytic peptide used | AAR92436 | 17 | 27 | 45.0 | 49 | 21 |
| Antimicrobial pept | AAY32601 | 20 | 24 | 45.0 | 49 | 20 |
| Antimicrobial pept | 76 | 19 | 24 | 45.0 | 49 | 19 |
| Synthetic lytic pe | AAR89991 | 17 | 23 | 45.0 | 49 | 18 |
| Lytic peptide used | 24 | 17 | 23 | 45.0 | 49 | 17 |
| Antimicrobial pept | AAY32599 | 20 | . 21 | 45.0 | 49 | 16 |
| crobial | AAY32598 | 20 | 21 | 45.0 | 49 | 15 |
| crobial | 9 | 19 | 21 | 45.0 | 49 | 14 |
| crobial pep | 76 | 19 | 21 | 45.0 | 49 | 13 |
| , R2, G10-novis | AAE20889 | 23 | 18 | 45.0 | 49 | 12 |
| , G10- | AAE20888 | 23 | 18 | 45.0 | 49 | 11 |
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ALIGNMENTS

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| | A (IIVOH-) INIV OHTO | | R 15-FEB-2000; 2000US-0182495. | | F 15-FEB-2001; 2001WO-US04822. | × | D 23-AUG-2001. | × | N WO200160162-A2. | | S Synthetic. | | | W Antimicrobial; microbial membrane disrupter; gene therapy; pathogen; | | B Peptide sequence used in the course of the invention. | | T 30-NOV-2001 (first entry) | | C AAG65539; | | D AAG65539 standard; peptide; 18 AA. | AAG65539 | RESULT 1 |

Result

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Score

Match Query

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Description

SUMMARIES

distribution

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AAG65539 AAP91336 AAW05116 AAR84926 AAW06684 AAW92435 AAR89992 AAX30017 AAR60065 AAR80735

Protamine-like pep Lytic peptide used Synthetic lytic pe Buforin II-derived Antimicrobial pept Synthetic antimicr

PPPPXRXP

WPI; 2001-565322/63.

Blazyk JF;

structure

Novel peptides having antimicrobial activity have positive charge to selectively disrupt microbial membranes, assume beta sheet structure membrane environment and are substantially amphipathic in beta sheet

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01-JUN-2001
01-JUN-2002
         Connor R.I., Korber B.T.M., Graham B.S., Hahn B.H., Ho D.D., Walker B.D., Neumann A.U., Vermund S.H., Mestecky J., Jackson S. Fenamore E., Cao Y., Gao F., Kalams S., Kunstman K.J., McDonald McWilliams N., Trkola A., Moore J.P., Wollnsky S.M., "Immunological and virological analyses of persons infected by himmunodeficiency virus type 1 while participating in trials of
                                                                                                                                                                                                                                                                                                                                                                                   Luo K.-X., He H.-T., Liu D.-X., Liu Z.-H., Xao H., Jiang X.-J., Liang W.-F., Zhang L.; "Novel variants related to TT virus wide distribution in China."; Submitted (JAN-2001) to the EMBL/GenBank/DDBJ databases. EMBL; AF345521; AKX1696.1; -. InterPro; IPR004219; Tryirus_Unk.

Pfam; PF02956; TT_ORF1; 1.
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                                                                                                                                                                                                                041556;
                                                                              STRAIN=C17;
MEDLINE=98105804; PubMed=9445059;
                                                                                                                                    Human immunodeficiency virus Viruses; Retroid viruses; Ret
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immunodeficiency virus type
recombinant gp120 subunit va
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                                                                                                                        NCBI_TaxID=11676;
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Retroviridae;
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Pred. No. 1.8e
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Q90CG7;
01-DEC-2001
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01-JUN-2002
                           01-MAR-2001 (TrEMBLrel. 16, Created)
01-MAR-2001 (TrEMBLrel. 21, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
Dihydrocrotate dehydrogenase.
Oryza sativa (Rice)
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzaae; Oryza.
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AIDS;
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                                                                                                                                                                                                                                                                                                                                                            MEDLINE=21342588; PubMed=11448170;
Carr J.K., Torimiro J.N., Wolfe N.D.,
Sanders-Buell E., Jagodzinski L.L., G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  J Virol. 72:1552-1576(1998).
EMBL; U84814; AAC58844.1; -
InterPro; IPR000328; Env GP41.
InterPro; IPR000777; GP120.
               NCBI_TaxID=4530;
                                                                                                                                                                                                                                                                                          Wirology 286:168-181 (2001).

EMBL; AF377959; AAK59217.1; -.

InterPro; IPR000328; Env GP41.

InterPro; IPR000777; GP120.
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Federapiel N.A., Palm C.J., Conway A.B., Conn L., Hansen N.F.
Federapiel N.A., Palm C.J., Rowley D., Buehler E., Dunn I
Altafi H., Araujo R., Huizar L., Rowley D., Buehler E., Dunn I
Gonzalez A., Kremenetekaia I., Kim C., Lenz C., Li J., Liu S.
Luros S., Schwartz J., Shinn P., Toriumi M., Vysotskaia V.S.,
Walker M., Yu G., Ecker J., Theologis A., Davis R.W.;
Submitted (APR-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; ACO05550; AAD25550.1; -.
SEQWENCE 421 AA; 48772 MW; 5B1ADF700118431E CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=20192166; PubMed=10725202; Laukkanen T., Carr J.K., Janssens W., McCutchan F.E., Op de Coul E., Cornel van der Groen G., Salminen M.O.; "Virtually full-length subtype F and and South America.";
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01-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Arabidopsis thaliana (Mouse-ear cress).
Bukaryota; Viridiplantae; Streptophyta Embryophyta; Tracheog
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
eurosids II; Brassicales; Brassicaceae; Arabidopsis.
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01-MAY-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
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NCBI_TaxID=11676;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human immunodeficiency virus type 1. Viruses; Retroid viruses; Retroviridae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=3702;
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Match;
rocal Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            814
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PF00517; GP41; 1.
Coat protein; Gly
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein.
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842 AA;
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0 (TrEMBLrel.
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(TrEMBLrel.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Glycoprotein; Polyprotein; Transmembrane. 95377 MW; F2C512902520ABD8 CRC64;
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                       43.6%;
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Pred. No. 1.5e
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Pred.
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annotation
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issen M.,
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1.5e+02;
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TIGRFAMS; TIGRO1188; drrA; 1.
PROSITE; PS00215; MITOCH CARRIER; UNKNOWN 1.
ATP-binding; Complete proteome.
ATP-binding; Somplete proteome.
323 AA; 35750 MW; 86FDCFC7CAB38
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Q9Y8W8;
01-NOV-1999
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01-JUN-2002
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STRAINKI;

MEDLINE=99310339; PubMed=10382966;

MEDLINE=99310339; PubMed=10382966;

MEANTABAYASİ Y., Hino Y., Horikawa H., Yamazaki S., Haikaw K., Kawarabayasi Y., Takahashi M., Sekine M., Baba S.-I., Ankai A., Jin-no K., Takahashi M., Nagai Y., Nishijima K., Nakazawa H. Hosoyama A., Fukui S., Nagai Y., Nishijima K., Nakazawa H. Takamiya M., Masuda S., Funahashi T., Tanaka T., Kubota K. Takamiya M., Masuda S., Funahashi A., Aoki K.-I., Kubota K. Takamiya M., Kushida N., Oguchi A., Aoki K.-I., Kubota K. Takamiya M., Kushida N., Oguchi A., Kukuchi H.,
SEQUENCE FROM N.A.
STRAINAV19 / DSM 6324 / JCM 9639;
MEDLINE=21927647; PubMed=11930014;
Slesarev A.I., Mezhevaya K.V., Mak.
Shcherbinina O.V., Shakhova V.V.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR003593; AAA_ATPase.
InterPro; IPR003499; ABC_transportr.
InterPro; IPR001993; Mitoch_carrier.
Pfam; PP00005; ABC_tran; 1.
ProDom; PD00006; ABC_transportr; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   crenarchaeon, Aeropyrum pernix Kl.";
DNA Res. 6:83-101(1999).
EMBL; AP000064; BAA81532.1;
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Desulfurococcaceae; Aero
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                                                                                                                              Methanopyrus.
NCBI_TaxID=2320;
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Q1-MAY-2000 (TrEMBLrel. 13, Createq)
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O1-JUN-2002 (TrEMBLrel. 21, Last annotation update)
N-7706420 protein (Hypothetical 41.9 kDa protein).
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Arch.
EMBL;
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Submitted (FEB-2002) to the EMBL/GenBank/DDBJ dat
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InterPro; IPR004219; TTvirus
Pfam; PF02956; TT_ORF1; 1.
SEQUENCE 742 AA; 88114 M
                                                                                                      Hypothetical SEQUENCE 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Arabidopsis thaliana (Mouse-ear cress).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosid
eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                      SEQUENCE FROM N.A. STRAIN=CV. COLUMBI
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MEDLINE=20083487; PubMed=10617197;
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ol. 146:1249-1266(2001).
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Pred. No. 4
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RESULT Q8TW69

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STRAIN=AV19. A.A.

MEDLINE=21927647; PubMed=11930014;

RA Slesarev A.I., McZhevaya K.V., Makkarova K.S., Polushin N Shcherbinina O.V., Shakhova V.V., Belova G.I., Aravind L. Rales B.A., Rogozin I.B., Tatusov R.L., Wolf Y.I., Stett RA Malykh A.G., Koonin E.V., Kozyavkin S.A.;

"The complete genome of hyperthermophile Methanopyrus kan and monophyly of archaeal methanogens.";

RI Proc. Natl. Acad. Sci. U.S.A. 99:4644-4649(2002).

RMBL; AE010407; AAM02380.1; -.

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                                                                                                         Mesorhizobium loti.";
DNA Res. 7:331-338(2000).
EMBL; AP003010; BAB53093.1; -.
                                                                                                                                                    Kaneko T., Nakamura Y., Sato S., Asamizu E., Kato T., Sasamot Watanabe A., Idesawa K., Ishikawa A., Kawashima K., Kimura T., Kishida Y., Kiyokawa C., Kohara M., Matsumoto M., Matsuno A., Mochizuki Y., Nakayama S., Nakazaki N., Shimpo S., Sugimoto M Takeuchi C., Yamada M., Tabata S.;
                                                                                     Hypothetical SEQUENCE 34
                                                                                                                                                                                                          STRAIN=MAFF303099;
MEDLINE=21082930; PubMed=11214968;
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Phyllobacteriaceae; Mesorl
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349 AA; 37473 MW; B7E34ECECCC39304 CRC64;
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Submitted (OCT-1997) to the EMBL/GenBank/DDBJ
EMBL; AF030154; AAD09724.1; -
InterPro; IPR004912; Adeno VII.
Pfam; PF03228; Adeno VII; 1.
SEQUENCE 171 AA; 18959 MW; OBACBB1C7
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STRAIN=WBR-1;
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MEDLINE=99119503; PubMed=9918888;
Tidamakanti N.,
                                 01-OCT-2000 (TrEMBLrel.
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GMP*synthase.
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SEQUENCE
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Archaea; Euryarchaeota;
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MEDLINE=21927647; PubMed=11930014;
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             Xylella fastidiosa
                       XF0560.
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ykh A.G., Koonin E.V., Kozyavkin S.A.;
ykh experies of hyperthermophile Methanopyrus
le complete genome of hyperthermophile Methanopyrus
monophyly of archaeal methanogens.";
c. Natl. Acad. Sci. U.S.A. 99:4644-4649(2002).
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RA Barros M.H., Bonaccorsi E.D., Bordin S., Bove J.M., Briones M.R.S.,
RA Bueno M.R.P., Camargo A.A., Camargo L.E.A., Carraro D.M., Carrer H.,
ROLauto N.B., Colombo C., Costa F.F., Costa M.C.R., Costa-Neto C.M.,
RA Colutinho L.L., Cristofani M., Dias-Neto E., Docena C., El-Dorry H.,
RA Continho L.L., Cristofani M., Dias-Neto E., Docena C., El-Dorry H.,
RA Fraga J.S., Franca S.C., Franco M.C., Frohme M., Furlan L.R.,
RA Garnier M., Goldman G.H., Goldman M.H.S., Gomes S.L., Gruber A.,
RA HO P.L., Hoheisel J.D., Junqueira M.L., Kemper E.L., Kitajima J.P.,
RA Krieger J.E., Kuramae E.E., Laigret F., Lambais M.R., Leite L.C.C.,
RA Lemos E.G.M., Lemos M.V.F., Lopes S.A., Lopes C.R., Machado J.A.,
Marques M.V., Martins E.M.L., Martins E.M.F., Matsukuma A.Y.,
RA Manques M.V., Martins E.M.F., Matsukuma A.Y.,
RA Manda M.A., Nabrega F.G., Munes L.R., Oliveira M.A.,
RA Mhani A. Jr., Nobrega F.G., Nunes L.R., Oliveira M.A.,
RA Quaggio R.B., Roberto P.G., Rodrigues V., de Rosa A.J.M.,
RA de Souza M.E., Jr., de Sa R.G., Santelli R.V., Sawasaki H.E.,
RA da Silva A.C.R., da Silva A.M., da Silva F.R., Silva W.A.,
RA da Silva A.C.R., da Silva A.M., Verjovski-Almeida S., Vettore A.L.,
RA Gason W.A., Zatz M., Meddanis J., Setubal J.C.,
RA Zago M.A., Zatz M., Meddanis J., Setubal J.C.,
RA Zago M.A., Zatz M., Meddanis J., Setubal J.C.,
RA RA Hollanda H., Van Sluys M.A., Verjovski-Almeida S., Vettore A.L.,
RA Lagolanda S., Neberto of the plant pathogen Xylella fastidiosa.";
RI Marture 406:151-159(2000).
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TT virus.
Viruses; ssDNA viruses; v
Viruses; ssDNA viruses; v
VALUSE_TaxID=68887;
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01-DEC-2001
01-JUN-2002
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STRAIN=KT-10F;

MEDLINE=21440417; PubMed=11556704;

Muljono D.H., Nishizawa T., Tsuda F.,

"Molecular epidemiology of TT virus (
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PROSITE; PS00442; GATASE_TYPE_I;

Complete proteome.
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                                                                                                         SEQUENCE FROM N.A.
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  , Takahashi M., (TTV) and chara
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 2000000000
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Perfect score:
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1: sp_archea:*
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109
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sp_plant:*
sp_vrodent:*
sp_vertebrate:*
sp_unclassified:*
sp_rvirus:*
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sp_phage:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 9 | v | 4 | ω | N | 14 | Result No. |
|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|
| 46 | 46.5 | 47 | 47 | 47 | 47 | 47 | 47.5 | 48 | 48 | 48 | 49.5 | 50 | 50 | 51.5 | 53.5 | Score |
| 42.2 | 42.7 | 43.1 | 43.1 | 43.1 | 43.1 | 43.1 | 43.6 | 44.0 | 44.0 | 44.0 | 45.4 | 45.9 | 45.9 | 47.2 | 49.1 | Query |
| 104 | 468 | 862 | 841 | 760 | 331 | 323 | 421 | 842 | 349 | 241 | 349 | 742 | 240 | 428 | 171 | Length |
| 16 | 10 | 15 | 15 | 12 | 17 | 17 | 10 | 15 | 16 | 17 | 10 | 12 | 16 | 17 | 12 | BG |
| Q986F0 | Q9FZM9 | Q90CG7 | 041556 | Q99AR5 | Q8TXA5 | 8M8A6Ö | 067860 | Q9QM83 | Q987V7 | 69MT8Ö | Q9SHX2 | Q91PS3 | Q9PFU7 | Q8TXS5 | 071097 | ID |
| Q986f0 rhizobium 1 | Q9fzm9 oryza sativ | Q90cg7 human immun | O41556 human immun | Q99ar5 tt virus. o | Q8txa5 methanopyru | Q9y8w8 aeropyrum p | Q9sy90 arabidopsis | Q9qm83 human immun | Q987v7 rhizobium l | Q8tw69 methanopyru | Q9shx2 arabidopsis | Q91ps3 tt virus. o | Q9pfu7 xylella fas | Q8txs5 methanopyru | 071097 bovine aden | Description |

| 5 | 44 | 43 | 42 | 41 | 40 | 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 |
|--------------------|--------------------|--------------------|-------------------|--------------------|-------------------|--------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------|--------------------|-------------------|--------------------|--------------------|--------------------|--------|--------------------|
| 45 | <u>4</u> 5 | 45 | 45 | 4 U | 45 | 45 | 45 | 45 | 45 | 45 | 4 5 | 45 | 45.5 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 |
| 41.3 | 41.3 | 41.3 | 41.3 | 41.3 | 41.3 | 41.3 | 41.3 | 41.3 | 41.3 | 41.3 | 41.3 | 41.3 | 41.7 | 42.2 | 42.2 | 42.2 | 42.2 | | 42.2 | | 42.2 | 42.2 | 42.2 | 42.2 | 42.2 | 42.2 | 42.2 | 42.2 |
| 849 | 847 | 847 | 650 | 602 | 579 | 577 | 405 | 394 | 340 | 316 | 304 | 277 | 34 | 999 | 859 | 859 | 838 | 838 | 723 | 673 | 452 | 452 | 451 | 263 | 242 | 234 | 229 | 201 |
| 15 | 15 | 15 | ഗ | 16 | տ | N | ب | 17 | N | N | 17 | σ | 13 | 4 | 15 | 15 | 15 | 15 | 12 | 16 | 16 | 91 | 16 | 10 | 9 | 16 | 16 | 2 |
| Q8UT64 | Q90CW2 | Q994M9 | Q95U14 | Q9CCU8 | Q9W472 | Q49739 | Q8X259 | Q8TVF5 | Q9L6V4 | 033872 | 027855 | P92151 | P83264 | Q9NQ36 | Q8UTD6 | Q72940 | Q8UTC7 | Q9DVL4 | Q9DUC4 | Q8YDS8 | Q8X9F5 | Q8ZBW1 | Q8XFW5 | Q9LN00 | Q94ML3 | Q8U7B9 | Q9WZL2 | Q9K523 |
| Q8ut64 human immun | Q90cw2 human immun | Q994m9 human immun | Q95u14 drosophila | Q9ccu8 mycobacteri | Q9w472 drosophila | | Q8x259 methanopyru | Q8tvf5 methanopyru | Q916v4 xanthomonas | O33872 xanthomonas | O27855 methanobact | P92151 caenorhabdi | P83264 scomber sco | 5 | Q8utd6 human immun | Q72940 human immun | Q8utc7 human immun | Q9dvl4 human immun | Q9duc4 tt virus. o | Q8yds8 brucella me | | Q8zbw1 yersinia pe | Q8xfw5 salmonella | Q9ln00 arabidopsis | $\boldsymbol{\pi}$ | Q8u7b9 agrobacteri | | Q9k523 mycobacteri |

ALIGNMENTS

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|--|------------|--|---|----|--------------------|--|----|---|-----------------------------------|---------------|--------------------|-------------------------------|-----------------------------|---|-------------|--|-----------------------------------|-------|--------------------|-------------------|---|-----|----|---------------------------------|-----------------|--------------------------------------|----|---------------------------------|--------------|
| AGENOVITUS TYPE 3."; Virus Genes 17:99-100(1998). [4] SEQUENCE FROM N.A. | 3 - | Lee J.B., Baxi M.K., Idamakanti N., Reddy P.S., Zakhartchouk A.N., Pyne C., Babiuk L.A., Tikoo S.K.: | | | SEOUENCE FROM N.A. | "Characterization of bovine adenovirus type 3 early region 2B."; | | Baxi M.K., Reddy P.S., Zakhartchouk A.N., Idamakanti N., Pyne C., | MEDLINE=98318755; PubMed=9654686; | CTEATURE 2.1. | SEQUENCE FROM N.A. | (3) TIO1. /2:1394-1402(1998). | povine adenovirus type 3."; | "Nucleotide sequence, genome organization, and transcription map of | Tikoo S.K.; | Reddy P.S., Idamakanti N., Zakhartchouk A.N., Baxi M.K., Lee J.B., | MEDLINE=98105785; PubMed=9445040; | 3R-1; | SEQUENCE FROM N.A. | NCB1 Taxid=10510; | Viruses; dsDNA viruses, no RNA stage; Adenoviridae; Mastadenovirus. | w | | (TrEMBLrel. 21, Last annotation | (TrEMBLrel. 07, | 01-AUG-1998 (TrEMBLrel. 07, Created) | | O71097 DREITMINARY: DRT: 171 AA | 다 다 1 |

25 VRRIVRRIGTLARRRVQQ 42

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15-DEC-1998 (Rel. 37, Last annotation
Protamine YII (Clupeine YII).
Clupea pallasii (Pacific herring), a
Clupea harengus (Atlantic herring).
                                                                                       STRAIN=Nichols;
MEDLINE=9832770; PubMed=9665876;
MEDLINE=9832770; PubMed=9665876;
Fraser C.M., Norris S.J., Weinstock G.M., White O., Sutton G.G.,
Praser C.M., Norris S.J., Weinstock G.M., Wetchum K.A.,
Dodson R., Gwinn M., Hickey E.K., Clayton R., Ketchum K.A.,
Sodeorgren E., Hardham J.M., McLeod M.P., Salzberg S., Peterson J.,
Khalak H., Richardson D., Howell J.K., Chidambaram M., Utterback T.
Khalak H., Richardson D., Bowman C., Cotton M.D., Pujii C., Garland
McDonald L., Artiach P., Bowman C., Cotton M.D., Pujii C., Garland
McDonald L., Artiach P., Bowman C., Sandusky M., Weidman J., Smith H.C
                                                                                                                                                                                                                                                                                                                   O83439;
16-OCT-2001
16-OCT-2001
15-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SPECIES-C.harengus;
Chang W.J., Nukushina M., Ishii S., Nakahara C., Ando T.;
Submitted (AUG-1970) to the PIR data bank.
-I- FUNCTION: PROTAMINES SUBSTITUTE FOR HISTONES IN THE CHROMATIN SPERM DURING THE HAPLOID PHASE OF SPERMATOGENESIS. THEY COMPAC SPERM DNA INTO A HIGHLY CONDENSED, STABLE AND INACTIVE COMPLEX SUBCELLULAR LOCATION: Nuclear.
-I- SUBCELLULAR LOCATION: Nuclear.
-I- TISSUE SPECIFICITY: TESTIS.
Science 281:375-388(1998).

-I- FUNCTION: PRODUCES ATP FROM ADP IN THE PRESENCE OF GRADIENT ACROSS THE MEMBRANE.

-I- CATALYTIC ACTIVITY: ATP + H(2)O + H(+)(In) = ADP + H(+)(Out).
                                                                   "Complete genome spirochete.";
                                                                                                                                                                                                                                                                                           V-type ATP synthase subunit ATPE OR TP0424.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chromosomal protein; Nucleosome core; Spermatogenesis; Testis; DNA condensation; Nuclear protein.
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                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                               Treponema pallidum.
Bacteria; Spirochaetales;
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PIR; A37575; CLHR2A.
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(Rel. 01, Last sequence update)
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t E (EC 3.6.3.14) (V-type ATPase
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                                                                                                 EMBL; V01555; CAA24821.1; -.
PIR; A03776; QQBE34.
PIR; S33026; S33026.
InterPro; IPR003840; Herpes_helicase.
                                                                                                                                                                                                                                                                                                                                              Baer R., Bankier A.T., Biggi
Gibson T.J., Hatfull G., Hud
Tuffnell P.S., Barrell B.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                       Epstein-barr virus (strain B95-8) (Human herpesvirus Viruses; dsDNA viruses, no RNA stage; Herpesviridae; Gammaherpesvirinae; Lymphocryptovirus.
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                                                             Pfam; PF02689; Herpes Helicase; 1.
DNA replication; ATP-binding; Helicase; Early p
NP_BIND 72 79 ATP (BY SIMILARITY
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                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                          "DNA sequence and expression of Nature 310:207-211(1984).
                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=84270667;
                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=10377;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Probable helicase
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SIMILARITY: BELONGS TO FAMILY THAT GROUPS EHV-1 57, EBV BBLF4, HCMV UL105, AND VZV 5
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232 AA; 24977
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MW; CA8184EC3B642D1E CRC64;
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              59;
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                                          "Thynnin, the protamine of the tuna fish: the amino acid sequence thynnin Z2. XIV. Communication on the structure of the protamines described by E. waldschmidt-Leitz et al.";
Hoppe-Seyler's Z. Physiol. Chem. 354:543-549(1973).

-i- FUNCTION: PROTAMINES SUBSTITUTE FOR HISTONES IN THE CHROMATIN SPERM DURING THE HAPLOID PHASE OF SPERMATOGENESIS. THEY COMPACE SPERM DURING A HIGHLY CONDENSED, STABLE AND INACTIVE COMPACE SPERM DUA INFO A HIGHLY CONDENSED, STABLE AND INACTIVE COMPLEX CONTROL STABLE AND SPECIFICITY: TESTIS.

-i- TISSUE SPECIFICITY: TESTIS.

-i- MISCELLULAR LOCATION: Nuclear.

-i- TISSUE SPECIFICITY: TESTIS.

-i- MISCELLANEOUS: THE THYNNIN Z1 SEQUENCE IS SHOWN.

PIR; A01657; TYTUZI.
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thymnin Zl. XIII. C
the studies of E. V
Hoppe-Seyler's Z. I
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CARBOHYD
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Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Actinopterygii; Neopterygii; Teleostei; Buteleostei; Neoteleostei;

Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Scombroi

Scombridae; Thunnus.
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MEDLINE=75039979;
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                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
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                                                                                                                                                                                                                                                                                                                                                                                                                           "The complete genome sequence of the hyperthermophilic, reducing archaeon Archaeoglobus fulgidus.";
Nature 390:364-370 (1997).
-!- SIMILARITY: BELONGS TO THE UPF0095 FAMILY.
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Archaea; Euryarchaeota; Archaeoglobi; Archaeoglobales;
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InterPro; IPR000777;
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NCBI_TaxID=31678;
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Viruses; Retroid viruses; Retroviridae; Lentivirus.
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Envelope polyprotein GP160 precursor [Contains:
glycoprotein (GP120); Transmembrane glycoprotein
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MEDLINE=88281278; PubMed=3395517;
MEDLINE To Josephs S.F., Reitz M.
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                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; J03653; AAA44684.1; -.
HIV; J03653; ENV$JV1.
InterPro; IPR000328; Env GP41.
InterPro; IPR000777; GP120.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human immunodeficiency virus type 1 (Z-84 isolate) (HIV-1). Viruses; Retroid viruses; Retroviridae; Lentivirus. NCBI TaxID=11681;
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15-JUN-2002
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                                                                                                                                                             ENV_HV1W2 STANDARD; PRT; 847 AA. P05880; 01-NOV-1988 (Rel. 09, Created) 01-NOV-1988 (Rel. 09, Last sequence update) 15-JUL-1999 (Rel. 38, Last annotation update) Envelope polyprotein GP160 precursor [Contains: Eglycoprotein (GP120); Transmembrane glycoprotein
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Pyridine nucleotide biosynthesis; Complete proteome.

SEQUENCE 304 AA; 34393 MW; B5C48ACE482143DD CRC64;
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MEDLINE=98037514; PubMed=9371463;
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Archaea; Euryarchaeota; Methanobacteria; Methanobacterialea;
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SEQUENCE FROM N.A. MEDLINE 86235450;
                                                                  NCEJ_TaxID=11705;
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Viruses; Retroid viruse
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es; Retroviridae; Lentivirus
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15-JUN-2002
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"Construction of a contiguous 874-kb sequence of the Escherichia coli

"Construction of a contiguous 876-8.8 min on the linkage map and

- Kl2 genome corresponding to 50.0-68.8 min on the linkage map and
analysis of its sequence features.";

DNA Res. 4:91-113(1997).
                                                                                                                                                               EMBL; M58699; AAA97504.1;
EMBL; AE000345; AAC75638.:
EMBL; D90886; BAA16470.1;
                                                                                                                                                                                                                                                                                                   the European Bioinformatics Institute. There are no rest
use by non-profit institutions as long as its content
modified and this statement is not removed. Usage by ar
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                                                                                                                EMBL; AE000345; AAC75638.1;
EMBL; D90886; BAA16470.1; AI
EMBL; D90887; BAA16473.1; AI
PIR; JH0368; JH0368.
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MEDLINE=97349980;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A. STRAIN=K12 / MG1655;
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                                                                  EcoGene; EG10781; pssA.
InterPro; IPR001736; PLD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 - I - SUBCELLULAR LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Phosphatidylserine synthase from Escherichia coli.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dowhan W.;
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SUBUNIT: MULTIMERIC.
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PF00614; PLDc; 2.
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Submitted (OCT-1996) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: THE ROLE OF THE PRECURSOR MIGHT BE TO CONDENSE
VIRAL PROCHEOMATIN FOR ENCAPSIDATION BY VIRTUE OF THE TWO
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16-OCT-2001
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Kawarabayasi Y., Hino Y., Horikawa H., Yamazaki S., Haikawa Jin-no K., Takahashi M., Sokine M., Baba S.-I., Ankai A., I Hosoyama A., Fukui S., Nagai Y., Nishijima K., Nakazawa H., Takamiya M., Masuda S., Funahashi T., Tanaka T., Kudoh Y., Yamazaki J., Kushida N., Oguchi A., Aoki K.-I., Kubota K., Nakamura Y., Nomura N., Sako Y., Kikuchi H.;

"Complete genome sequence of an aerobic hyper-thermophilic
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                                                            this swiss-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content modified and this statement is not removed. Usage by and entities remained.
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Pfam; PF01198; Ribosomal_L31e; 1.
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Davison A.J., Telford E.A., Matson M.S., M
"The DNA sequence of adenovirus type 40.";
J. Mol. Biol. 234:1308-1316(1993).
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SYA METTH
PRTB ONCMY
YACP BACSU
1F2A SULSO
V724_METTH
VCO7_ADB04
EX7L_RIME
EX7L_RIME
EX7L_RIME
EX7L_RIME
PRT3_ONCMY
PRT2_CLUPA
YACD BACSU
1F2A SULSO
V724_METTH
VCO7_ADB04
EX7L_RIME
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ID RL31 ABRPE
STANDARD; PRT; 105
AC Q9YD25;
DT 30-MAY-2000 (Rel. 39, Created)
DT 30-MAY-2000 (Rel. 39, Last sequence updated)
DT 15-JUN-2002 (Rel. 41, Last annotation upon 50S ribosomal protein L31e.
GN RPL31E OR APE1087.
OS Aeropyrum pernix.
OC Archaea; Crenarchaeota; Thermoprotei; Determine the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composition of the composi
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Best Local S
Matches 13
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PIR; A26762; B26762.

PIR; B26762; B26762.

Chromosomal protein; Nucleosome core; Spermatogenesis; DNA-binding; Testis; DNA condensation; Nuclear protein.

Testis; DNA condensation; Nuclear protein.

Testis; DNA condensation; Nuclear protein.

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Okamoro Y., Muta E., Ota S.;

"Primary structures of M6 and M7 of mugiline beta (Mugil japonicus)."

J. Biochem. 101:1017-1024(1987).

-I. FUNCTION: PROTAMINES SUBSTITUTE FOR HISTONES IN THE CHROMATIN OF SPERM DURING THE HAPLOID PHASE OF SPERMATOGENESIS. THEY COMPACT SPERM DUA INTO A HIGHLY CONDENSED, STABLE AND INACTIVE COMPLEX.

-I. SUBCELLULAR LOCATION: Nuclear.

-I. TISSUE SPECIFICITY: TESTIS.

-I. NISCELLANDOUS: THE SEQUENCE OF COMPONENT M6 IS SHOWN.
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P08130;
01-AUG-1988 (Rel. 08, Created)
01-AUG-1988 (Rel. 08, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Protamine M6/M7 (Mugiline beta).
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii, Releostei; Euteleostei, Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Mugilomorpha; Mugilidae;
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NCBI_TaxID=48193;
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on update)
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Scoring table: Sequence:

Title: Perfect score:

US-10-079-075-5 109

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Copyright

Science

294, 2323-2328, 2001

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R;Theologis, A.; Ecker, J.R.; Palm, C.J.; Federspiel, N.A.; Kaul, S. Chin, C.W.; Chung, M.K.; Conn, L.; Conway, A.B.; Conway, A.R.; Crea ansen, N.F.; Hughes, B.; Huizar, L. Nature 408, 816-620, 2000

A;Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; C.A.; Li, J.H.; Li, Y.; Lin, X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Rizzo, M.; Rooney, T.; Rowley, D.; St.; Schwartz, J.R.; Shinn, P.; Southwick, A.M. A;Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M. A;Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M. A;Authors: Salzberg, S.L.; Schwartz, J.R.; Venter, J.C.; Davis, R.W. A;Title: Sequence and analysis of chromosome 1 of the plant Arabidop A;Title: Sequence and analysis of chromosome 1 of the plant Arabidop
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ';Species: Arabidopsis thaliana (mouse-ear cress); Date: 02-Mar-2001 #sequence_revision 02-Mar-2001; Accession: E86215
s.; Moule, S.; O'Gaora, P. ature 413, 848-852, 2001 ature 413, 848-852, 2001 ature 413, 848-852, 2001 c.;Authors: Parry, C.; Quall, M.; Rutherford, K.; Simmonds, M.; Title: Complete genome sequence of a multiple drug resistant, Reference number: AB0502; PMID:11677608 c.;Accession: AB0631 c.;Accession: AB0631 c.;Status: preliminary
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;Molecule type: DNA
;Residues: 1-263 <STO>
;Residues: NID:g8778838;
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|ACCEBBION: AB0831
|Parkhill, J.; Dougan, G.; James, K.D.; Thomson, N.R.; Pickard, I
|Parkhill, J.; Dougan, G.; James, R.J. Davies, R.M.; Dowd,
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Cross-references: GB:AE007870; PIDN:AAK88913.1;
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                                                            Skelton, J.; Stevens, Salmonella enterica s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GSPDB:GN00141
                                                                                                                                                                                                     03-Jun-2002
                                                                                                                                           D.; Wain, J
, L.; White,
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Maiti, R.; M
                                                                                                                                           J.; Churcher
e, N.; Farrar
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war, K.;
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A;Residues: 2-32,'R',34-78,'DD',80-165,'NIA',169-287,'FV',290-309,'S',311-452 <DE2>
C;Comment: The enzyme catalyzes the committed step to phosphatidylethanolamine biosynthe
                                                            Search completed: June Job time: 10.9574 sec
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F;240-285/Region:
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;Gene: pssA; pss :Superfamily: Escherichia coli

CDPdiacylglycerol-serine O-phosphatidyltransferase

Status: preliminary

Keywords: transferase

hydrophobic hydrophobic

Matches Query Match

433

RKLIRRLRRI--RIDRLISRIL RRVVRRVRRVVRRVVRVVRRVV

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10.9574 secs

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A;Gene: STY2845
C;Superfamily: Escheric
C;Keywords: transferase
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A;Cross-references: GB:AL513382; PIDN;CAD05836.1; PID:g16503811; GSPDB:GN00176
C;Genetics:
A;Molecule type: DNA
A;Residues: 2-32,'K',34-78,'DD',80-165,'NIA',169-287,'FV',290-309,'S',311-452 <DEC>
A;Residues: GB:M58699; NID:g147388; PIDN:AAA97504.1; PID:g147389
A;Cross-references: GB:M58699; NID:g147388; PIDN:AAA97504.1; PID:g147389
A;Dechavigny, A.; Heacock, P.N.; Dowhan, W.
J. Biol. Chem. 266, 10710, 1991
A;Reference number: A40406; MUID:91244856; PMID:2037609
                                                                                                                                                                                                                                                                                                                                                  A; Reference number: A; Accession: H65036
                                                                                                                                                                                                                                                                                                                                                                         Science 277, 1453-1462, 1997
A;Title: The complete genome sequence of Escherichia coli A;Reference number: A64720; MUID:97426617; PMID:9278503
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A; Residues: 1-452 <BI
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                                                                                                                               A;Reference number: JH0368;
A;Accession: JH0368
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Matches
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Accession: H55036; JH0368; A40406
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6, 5323-5332, 1991
                                                                                                                                                                                                                                                                                                                                                                                                                                        Plunkett III, G.; Bloch, Wau, B.; Shao, Y.
                                                                                                                                                                                                                                                                                                                                acid sequence not shown; translation not
                                                                                                                                                        inactivation of the pss gene of Escherichia coli: phosphatidyletha
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A;Reference number: A72450; MUID:99310339; PMID:10382966
A;Accession: D72484
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-323 <KAN>
A;Cross-references: DDBJ:AP000064; NID:g5105945; PIDN:BA;A;Experimental source: strain K1
C;Genetics:
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R;Besansky, N.J.; Paskewitz, S.M.; Mills-Hamm, D.M.; Collins, submitted to the EMBL Data Library, June 1992 submitted to the EMBL Data Library, June 1992
                                                                                                                                                                                                              R;Tamura, M.; Yamamoto, H.; Onitake, K.
Dev. Growth Differ. 36, 419-425, 1994
A;Title: Cloning of protamine cDNA of the medaka (Oryzias A;Reference number: I51089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N;Alternate names: reverse transcriptase
C;Species: Anopheles gambiae (African malaria mosquito)
C;Date: 17-Apr-1993 #sequence_revision 17-Apr-1993 #text_change 09-Sep-1997
C;Accession: S27771
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C;Superfamily: u
F;29-221/Domain:
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A; Accession: S27771
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                                                                                                                      Cross-references: GB:D63796; Superfamily: protamine Y2.
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;Cross-references: EMBL:M93690; NID:g159615;
;Keywords: nucleotidyltransferase
                                                                                                                                                    Residues: 1-32 <TAM>
                                                              Matches
                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                 Status: preliminary; translated
                                                                                                                                                                                                                                                                                          Species: Oryzias latipes (Japanese medaka)
Date: 13-Sep-1996 #sequence_revision 13-Sep-1996
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Best Local (
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RESULT 11
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A/Gene: TM0753
C/Superfamily: spore germination protein C2;
F:48-147/Domain: bioC homology <BIOC>
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                                                                                                                                                                                                                                                                                 A; Authors: Yoo, H.; ster, E.W.
A; Title: The Genome
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A; Residues: 1-230 < KUR>
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                                                                                                                                                                                                                                                                                                                                                                                                       C;Date: 11-Jan-2002 #sequence_revision 11-Jan-2002 #text_change 11-Jan-2002
                                                                                                                                                                                                                                                                                                                                                                                                                            transcription regulator, TetR family Atu4530 [imported] - Agrobacterium tumefaciens C_iSpecies: Agrobacterium tumefaciens
                                                                                                                        A; Map position:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R; Nelson, K.E.; Clayton,
                                                                           Best
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                                                                                                                          linear chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           for lateral gene transfer between Archaea and
r: A72200; MUID:99287316; PMID:10360571
                                                                                                                                                                                                                                                                                                               Tao,
                                                                                                                                                                                                                                                                                   of the Natural Genetic
                                                                                                                                                                                                                                                                    AB2577;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  42.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A.M.; Cotton,
                                                                                                                                                                                                                                                                                                               Y.; Biddle, P.; Jung, M.; Krespan, W.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R.A.;
                                                                           42.2%;
                                                                                                                                                                                                                                                                      PMID:11743193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gill, S.R.; Gwinn, M.L.; Dodson, R.J.; Haft, D.H.; Hi
Cotton, M.D.; Pratt, M.S.; Phillips, C.A.; Richardson,
                                                                                                                                                                                      PIDN:AAL45324.1; PID:g17743015; GSPDB:GN00187
                                                          7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4.
                                                                           Score
Pred.
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Pred. No.
                                                                                                                                                                       (Dupont
                                                            Mismatches
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                                                                       . 46;
. No.
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                                                                       DB
45;
                                                                                                                                                                                                                                                                                 Engineer
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 2;
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                                                                                         2;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #text_change 21-Jul-2000
                                                                                        Length
                                                                                                                                                                                                                                                                                 Agrobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
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                                                            Indels
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McClell
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C;Date: 22-Oct-2001 #sequence_revision
C;Accession: G98173

R; Goodner,

В.;

Hinkle,

Wollam,

., G.;

; Gattung, Allinger,

3 · ·

; Miller, h ; Doughty,

N.; Blanchard, M.; Qurollo, D.; Scott, C.; Lappas, C.;

B.; Goldm Markelz,

Goldman rkelz, B.

22-Oct-2001

#text_change 11-Jan-2002 Agrobacterium tumefaciens

(strain

probable transcription regulator PA0243 [imported]
C;Species: Agrobacterium tumefaciens

G98173

RESULT 12

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A;Experimental source: strain 9a5c
R;Simpson, A.J.G.; Reinach, P.C.; Arruda, P.; Abreu, F.A.; Acencio, M.; Alvarenga, R.; A
Briones, M.R.S.; Bueno, M.R.P.; Camargo, A.A.; Camargo, L.E.A.; Carraro, D.M.; Carrer, H
Briones, B.; Docena, C.; El-Dorry, H.; Facincani, A.P.; Ferreira, A.J.S.
submitted to GenBank, June 2000
A;Authors: Ferreira, V.C.A.; Ferro, J.A.; Fraga, J.S.; Franca, S.C.; Franco, M.C.; Frohm
J.D.; Junqueira, M.L.; Kemper, B.L.; Kitajima, J.P.; Krieger, J.B.; Kuramae, E.E.; Laigr
Chado, M.A.; Madeira, A.M.B.N.; Madeira, H.M.F.; Marxino, C.L.; Marques, M.V.; Martins, E.
A;Authors: Martins, E.M.F.; Matsukuma, A.Y.; Menck, C.F.M.; Miracca, B.C.; Miyaki, C.Y.;
F.G.; Nunes, L.R.; Oliveira, M.A.; de Oliveira, M.C.; de Oliveira, R.C.; Palmieri, D.R.
Rodrigues, V.; Rosa, A.J. de M.; de Rosa Jr., V.B.; de Sa, R.G.; Santelli, R.V.; Sawasak
A;Authors: da Silva, A.C.R.; da Silva, F.R.; da Silva, A.M.; Silva Jr., W.A.; da Silvai,
A;Reference number: A59328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    probable ribosomal protein L31 APE1087 - Aeropyrum pernix (strain K1)
C;Species: Aeropyrum pernix
C;Date: 20-Aug-1999 #@@@@@@@
RESULT 5
C84477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: DNA
A; Residues: 1-105 < KAW>
                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GMP synthase xF0560 [imported] - Xylella fastidiosa (strain 9a5c)
C;Species: Xylella fastidiosa
C;Date: 18-Aug-2000 #sequence_revision 20-Aug-2000 #text_change 20-Aug-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  맑
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                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                     A; Contents: annotation
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A; Residues: 1-240 <SIM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7;Accession: F82790 are the Organization for Nucleotide R;anonymous, The Xylella fastidiosa Consortium of the Organization for Nucleotide Nature 406, 151-157, 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cross-references: GB:AE003903; GB:AE003849; NID:g9105416; PIDN:AAF83370.1; GSPDB:GN00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;Title: The genome sequence of the plant pathogen Xylella fastidiosa.;Reference number: A82515; MUID:20365717; PMID:10910347;Note: for a complete list of authors see reference number A59328 below
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Experimental source: strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cross-references: DDBJ:AP000060; NID:g5104188; PIDN:BAA80072.1; PID:d1043858; Experimental source: strain K1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Date: 20-Aug-1999 #sequence_revision Accession: H72708
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Best Local
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                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                  Query Match
Best Local
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H.; Takamiya, M.; Masuda, S.; Funahashi, T.; Tanaka, T.; Kudoh, Y.; Yamazaki, J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APE1087
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                                                                                                                                                                                                                                                     Similarity
                                                                                                            RRIARQVSAAPVARQVLRRFVRHARRAV 240
                                                                                                                                                                      RRVVRRV--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RRVV--RRVRRVVRRVVRRVVRR 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RRVYWGRRTRRAI-RAVRMVREFVRR 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
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                                                                                                                                                                                                                                               45.9%;
                                                                                                                                                                   -RRVVRRVVRVVRRVV 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 51.5; DE
Pred. No. 4.6;
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2;
                                                                                                                                                                                                                                               Score 50; DB
Pred. No. 15;
                                                                                                                                                                                                                        Mismatches
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                                                                                                                                                                                                                                                                         Length 240
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                    R;Kawarabayasi, Y.; Hino, Y.; Horikawa, H.; Yamazaki, S.; Haikawa, Y.; Jin-no, K.; awa, H.; Takamiya, M.; Masuda, S.; Funahashi, T.; Tanaka, T.; Kudoh, Y.; Yamazaki, DNA Res. 6, 83-101, 1999
                                                                                                      probable ATP-binding protein APE2516 - Aeropyrum pernix (strain K1)
C;Species: Aeropyrum pernix
C;Date: 20-Aug_1999 #sequence_revision 20-Aug-1999 #text_change 17-Mar-2000
C;Accession: D72484
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C;Acceesion: Dysort.
R;Theologis, A:; Ecker, J.R.; Palm, C.J.; Federspiel, N.A.; Naul, D.; Chin, C.W.; Chung, M.K.; Conn, L.; Conway, A.B.; Conway, A.R.; Creasy, T. ansen, N.F.; Hughes, B.; Hulzar, L.
Nature 408, 816-820, 2000
A;Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Khayk C.A.; Li, J.H.; Li, Y.; Lin, X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti Rizzo, M.; Rooney, T.; Rowley, D.; Sakano, H.
Rizzo, M.; Rooney, T.; Rowley, D.; Sakano, H.
A;Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Siker, M.; Wu, D.; Yu, G.; Fraser, C.M.; Venter, J.C.; Davis, R.W.
A;Title: Sequence and analysis of chromosome 1 of the plant Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Lin, X.; Kaul, S.; Rounsley, S.D.; Shea, T.P.; Benito, M.I.; Town, C.D.; Fujii, C.Y.; M.; Koo, H.; Moffat, K.S.; Cronin, L.A.; Shen, M.; VanAken, S.E.; Umayam, L.; Tallon, Leuss, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              hypothetical protein At2g06420 [imported] - Arabidopsis thaliana C;Species: Arabidopsis thaliana (mouse-ear cress) C;Species: 02-Feb-2001 #sequence_revision 02-Feb-2001 #text_change
                                                                                                                                                                                                                                                                                                        A; Molecule type: DNA
A; Residues: 1-421 <STO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Gene: At2g06420
A;Map position: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: DNA
A; Residues: 1-349.<STO>
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                                                                                                                                                                                                       A; Map position:
                                                                                                                                                                                                                                                                                                                                                           A;Status: preliminary
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     hypothetical protein T25B24.5 [imported] - Arabidopsis thaliana
C;Species: Arabidopsis thaliana (mouse-ear cress)
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                                                                                                                            Best
                                                                                                                                                       Query Match
                                                                                                                                                                                                                                  Gene: T25B24.5
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                                                                                                                            Local
336 VVERMRRVMEEGGWVGGGRKVVRVERDEPIRVCRR 370
                                                3 VVRRVRRVV-----RRVVRVVR----RVVRR 24
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                                                                                                                         Similarity
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                                                                                                   Conservative
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                                                                                                                                                                                                                                                                                   GB:AE005173;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1999
                                                                                                                         43.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              45.4%;
                                                                                                                                                                                                                                                                                   NID:g4585877; PIDN:AAD25550.1;
                                                                                              Score 47.5; Di
Pred. No. 51;
3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 49.5;
Pred. No. 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C.J.; Federspiel, N.A.; Kaul, S.; White, (Conway, A.B.; Conway, A.R.; Creasy, T.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
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                                                                                                                                                       BB
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P.; Southwick, A.M.; Sun,
C.; Davis, R.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>ب</u>
                                                                                                   ū
                                                                                                                                                 Length 421;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 349;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S.; Khaykin,
.S.; Maiti, R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GSPDB:GN00139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        02-Feb-2001
                                                                                                   13,
                                                                                                                                                                                                                                                                                   GSPDB:GN00141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          H.; Tallon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    O.; Alonso; Dewar, K.
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Complete genome sequence of

an

aerobic hyper-thermophilic Crenarchaeon,

Aeropy

GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

Run on: June 9, 2003, 11:48:06 ; Search time 9.95745 Seconds (without alignments) 231.709 Million cell updates/sec

Title:
Perfect score:
Sequence:

US-10-079-075-5 109 1 RRVVRRVRRVVRRVVRRVVRRVVRR 24

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

Searched: 283224 seqs, 96134422 residues

Total number of hits satisfying chosen parameters: 283224

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

PIR_73:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | œ | 7 | O | տ | . 4. | ω | 2 | | No. | Result | |
|----------|--------|--------|--------------------|--------------------|--------|--------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------|--------|--------------------|--------------------|--------------------|--------|--------|--------|--------|--------------------|-------------|--------|----|
| 44.5 | 44.5 | 44.5 | 45 | 45 | 45 | 45 | 45 | 45 | 45.5 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46.5 | 47 | 47.5 | 49.5 | 50 | 51.5 | 52 | 52 | Score | | |
| 40.8 | 40.8 | 40.8 | 41.3 | 41.3 | 41.3 | 41.3 | 41.3 | 41.3 | | 42.2 | 42.2 | 42.2 | 42.2 | 42.2 | 42.2 | | | 42.2 | 42.2 | 42.2 | 42.7 | 43.1 | 43.6 | 45.4 | 45.9 | 47.2 | 47.7 | 47.7 | Match | Query | ų. |
| 601 | 399 | 34 | 2351 | 856 | 602 | 577 | 304 | 277 | 34 | 673 | 452 | 452 | 452 | 452 | 451 | 263 | 234 | 230 | 229 | 32 | 1212 | 323 | 421 | 349 | 240 | 105 | 33 | 33 | Length | | |
| N | N | ь | N | ы | N | N | N | 'n | N | N | N | N | N | ш | N | N | N | N | N | N | N | N | N | N | N | N | N | N | DB | | |
| T36323 | B69487 | TYTUZ1 | G71415 | VCLJ3W | E86958 | S72834 | C69111 | T27597 | JN0582 | AG3521 | D91060 | B85905 | AG0397 | H65036 | AE0831 | E86215 | G98173 | AF3113 | G72337 | I51089 | S27771 | D72484 | D96641 ' | C84477 | F82790 | H72708 | B26762 | A26762 | | | |
| nembrane | hypot | | hypothetical prote | env polyprotein pr | roda | | quinolinate synthe | hypothetical prote | protamine (scombri | cation-transportin | CDPdiacylqlycerol- | CDPdiacylglycerol- | CDPdiacylglycerol- | CDPdiacylglycerol- | CDPdiacylqlycerol- | protein T6D22.16 [| probable transcrip | transcription regu | cal | | RNA-directed DNA p | probable ATP-bindi | hypothetical prote | | 3 | н | _ | protamine (muqilin | Description | | |

RESULT 3 H72708

| | | | | | Ī | - | - | - | | | | | | | _ |
|-------------------|-------------------|--------------|--------------|---------------|--------------|---------------|--------------------|-------------------|------------|------------|--------------------|------------|------------|-------------|-------------|
| 43.5 | 43.5 | 44 | 44 | 44 | 44 | 44 | 44 | . 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 |
| 39.9 | 39.9 | 40.4 | 40.4 | 40.4 | 40.4 | 40.4 | 40.4 | 40.4 | 40.4 | 40.4 | 40.4 | 40.4 | 40.4 | 40.4 | 40.4 |
| 1082 | 317 | 2049 | 1677 | 1153 | 898 | 809 | 779 | 382 | 374 | 294 | 276 | 232 | 58 | 30 | 30 |
| N | N | N | N | N | N | ۳ | N | N | N | N | N | N | N | μ | 1 |
| H81982 | B75012 | T29227 | T14267 | A97179 | A69092 | QQBE34 | AF1094 | T34940 | H91251 | D83108 | C75508 | E71325 | H91110 | CLHR2A | CLHRY2 |
| | | | | | | | | | | | | | | | |
| hypothetical prot | methanol dehydrog | hypothetical | Xin protein, | ATP-dependent | alanine-tRNA | BBLF4 protein | ATP dependent hel: | probable membrane | probable t | hypothetic | hypothetical prote | probable V | hypothetic | protamine ' | protamine ' |
| al prot | ehydro | | n, stag | ent exor | NA ligas | ein - 1 | ent hei | embran | tail prot | al pro | al pro | V-type i | al prote | LIIY | - IIX |

ALIGNMENTS

| Qy 2 RVVRRVVRRVVRRVVRRVVRR 24 : | Query Match 47.7%; Score 52; DB 2; Length 33; Best Local Similarity 56.5%; Pred. No. 1.4; Matches 13; Conservative 2; Mismatches 8; Indels 0; | proceamine (mugiline beta) M7 - Formosan gray mullet C;Species: Mugil japonicus (Formosan gray mullet) C;Date: 05-Jun-1988 #sequence_revision 05-Jun-1988 #text_change 23-Feb-1997 C;Accession: B2662 R;Okamoto, Y.; Muta, E.; Ota, S. J. Biochem. 101, 1017-1024, 1987 J. Biochem. 101, 1017-1024, 1987 A;Title: Primary structures of M6 and M7 of mugiline beta-(Mugil japonicus) A;Reference number: A91909; MUID:87279969; PMID:3301825 A;Accession: B26762 A;Accession: B26762 A;Accession: L-33 OKRA- R;Superfamily: protamine Y2 C;Keywords: DNA binding; nucleus | Qy 2 RVVRVVRVVRVVVRRVVRRVVRR 24 Qy 2 RVRRVRRVRRVRRVVRR 24 Db 9 RPIRRRRARAPIRRRRRVVRR 31 | mily: procamine Y2 s: DNA binding; nucleus atch 47.7%; Score 52; DB 2; Length 33; cal Similarity 56.5%; Pred. No. 1.4; cal Similarity 56.5%; Pred. No. 1.4; | _ | a, S. 1987 of M6 and M7 of | A26762 protamine (mugiline beta) M6 - Formosan gray mullet C;Species: Mugil japonicus (Formosan gray mullet) C;Date: 05-Jun-1988 #sequence_revision 05-Jun-1988 #text_change 23-Feb-1997 | RESULT 1 | |
|--------------------------------------|---|---|---|---|---|----------------------------------|---|----------|--|
|--------------------------------------|---|---|---|---|---|----------------------------------|---|----------|--|

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, LENGTH: 515 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: DNA (genomic)
US-08-796-899-23
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Best Local Similarity
Matches 7; Conserv
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INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PC compatible
COMPUTER: PC compatible
COMPUTER: PC compatible
COMPUTER: PATENT PC compatible
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/796,899
FILING DATE: 06-PEB-1997
CLASSIFICATION: 800
                                                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REGISTRATION NUMBER: 36,607
REFERENCE/DOCKET NUMBER: 028754-005
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 836-6620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/319,544
FILING DATE: 07-OCT-1994
                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
             SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                             PPLICANT:
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                                                                                                                                                                                                                                            TTLE OF INVENTION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STREET: P.U. CITY: Alexandria
                                                                                                                          COUNTRY:
                                                                                                                                                                                              ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Meuth,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DDRESSEE:
APPLICATION NUMBER: US/08/022,835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           314 KVVKVVQRVHR 324
                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 RVVRVVRRVVR 11
                                                                                                              20036-5601
                                                                                                                                                          Washington
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                                                                                                                                                                                                                                                                                                                                                                                                                           Application US/08022835
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                                                                                                                                                                           E: CUSHMAN, DAR!
Eleventh Floor,
                                                                                                                             USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        59.3%; ilarity 63.6%; Conservative
                                                                                                                                                                                                                                                          Garnter, Suzanne
VENTION: MOLECULAR CLONES OF HIV-1 AND USES
                                                                                                                                                                                                                                                                                                                          Gallo,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     United States
                                                                                                                                                                                                                                                                                                                                           Markham,
                                                                                                                                                                                                                                                                                                                                                          Reitz Jr., Marvin S. Franchini, Genoveffa
                                                                                                                                                                                                                                                                                        Popovic, Mikulas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Burns, Doane, Swecker & Mathis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Box 1404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Donna M
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836-2021

-- NO: 23:
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                                                                                                                                                                                                                                                                                                                          Robert
                                                                                                                                                                                                                                                                                                                                           Phillip D.
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                                                                                                                                                                           DARBY & CUSHMAN
oor, 1615 L. Street, N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 32; DB 4;
Pred. No. 2.9e+02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 515;
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Job time : 6.08511 secs
             Search completed: June 9, 2003, 12:04:51
                                                                                                                                                                                         US-08-022-835-6
                                                                                                                          Query Match
Best Local Similarity
Matches 6; Conserv
                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 855 aming
Type
                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/599,491
FILING DATE: 17-OCT-1990
                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
NAME: Scott, Watson T.
REGISTRATION NUMBER: 26,
                                                                                                                                                                                                        TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION: TELEPHONE: (202) 861-3000 TELEFAX: (202) 822-0944
                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
                                                              827 RVIEVLORAVR 837
                                                                                           1 RVVRVVRRVVR 11
                                                                                                                                                                                                                                     amino acid
                                                                                                                                                                                                                                                    855 amino acids
                                                                                                                            Conservative
                                                                                                                                           59.3%;
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                                                                                                                                                                                                                                                                                                                                                                   WTS/5683/78507/SRL
                                                                                                                                           Score 32; DB 1;
Pred. No. 4.7e+02;
                                                                                                                              Mismatches
                                                                                                                                                        Length 855
                                                                                                                              Indels
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NUMBER OF SEQUENCES:

169

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Best Local Similarity
Watches 5; Conserve
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                                                Query Match
Best Local S
Matches 7
                                                                                                                                                           TITLE OF INVENTION: No. 5994072el Proteins Involved in the Synthesis and Assembly TITLE OF INVENTION: of O-Antigen in Pseudomonas Aeruginosa FILE REFERENCE: 6580-089 CURRENT APPLICATION NUMBER: US/08/846,762A CURRENT FILING DATE: 1997-04-30 NUMBER OF SEQ ID NOS: 100 SOFTWARE: PatentIN Ver. 2.0 SEQ ID NO 46
                                                                                                                                                                                                                                                                                                                                                                                    Dequence 46, Application US/08846762A Patent No. 5994072
                                                                                                                                                                                                                                                                                                                                                                            GENERAL
                                                                                                               08-846-762-46
                                                                                                                                                                                                                                                                                                      APPLICANT: Lam, Joseph S.
APPLICANT: Burrows, Lori
APPLICANT: Charter, Deborah
APPLICANT: de Kievit, Teresa
TETE OF THEMENING V. C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: 212-765-2519 INFORMATION FOR SEQ ID NO:
                                                                                                                          ORGANISM: Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 21 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: No. 59455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 08/786,748
FILING DATE: 24-JAN-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 10112-0228
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OPERATING SYSTEM: MS-DOS
SOFTWARE: FastSEQ Version 2.0
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Rochelle K. Seide REGISTRATION NUMBER: 32 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08/932,682 FILING DATE: 18-SEP-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STREET:
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                                              l Similarity
7; Conserva
2 VVRVVRRVV 10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
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                                                  Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No. 5945507e
                                                               59.3%;
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                                                               Score 32; DB
Pred. No. 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 32; DB 2;
Pred. No. 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                              DB 2;
                                                1; Indels
                                                                              Length 35;
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                                                Gaps
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US-09-088-425-2
                                                                                                                                US-08-796-899-23
                                                                                                                                               RESULT 14
                                                                                                                                                                                                                                                                                                          US-09-088-425-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                     Sequence 23, Application US/08796899

Patent No. 6160202

GENERAL INFORMATION:
APPLICANT: BUSTOS, Mauricio M
APPLICANT: CHERN, Maw-Shenq
TITLE OF INVENTION: MODIFICATION OF SEED CROPS WITH
TITLE OF INVENTION: TRANSCRIPTION FACTORS
                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
ATTORNEY/AGENT INFORMATION:
AMME: Cerrone, Michael C
REGISTRATION UNMBER: 39,132
REFERENCE/DOCKET NUMBER: PF-0
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650-855-0555
                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: line
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: FastSEQ for Windows Version 2.0b CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM: MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
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CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                          MEDIA.
LIBRARY: Tru.
CNE: 289973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: 3174 FOR CITY: Palo Alto
                                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: 650-845-4166
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                                                                                                                                                                                        7 RVVRRVVQ 14
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                                                                                                                                                                                                                                                                                                                                                                                              amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                               443
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3174 Porter Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORLEY, NEIL C.
PATTERSON, CHANDRA
BAUGHN, MARIAH R.
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                                                                                                                                                                                                                                                              Score 32; DB 4;
Pred. No. 2.5e+02;
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                                                                                                                                                                                                                                                                            Length 443;
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Length 21;

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Best Local Similarity
Matches 5; Conserv
                                          CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/932,682
FILING DATE: 18-SEP-1997
CLASSIFICATION: 530
PRIOR APPLICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/786,748
FILING DATE: 24-VAN-1997
ATTORNEY/AGENT INFORMATION:
NAME: ROCHELLE K. Seide
REGISTRATION NUMBER: 32,300
REFERENCE/DOCKET NUMBER: AP30421-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 21 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 10112-0228
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Ronald, Montelaro C.
APPLICANT: Tencza, Sarah B.
APPLICANT: Mietzner, Timothy A.
APPLICANT: Mietzner, Timothy A.
TITLE OF INVENTION: NOVEL ANTIMICROBIAL PEPTIDES
NUMBER OF SEQUENCES: 169
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION:
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PRIOR APPLICATION DATA:
                                                                                                                                 TELEPHONE: 212-705-5000
MOLECULE TYPE: No. 5945507e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Rochelle K. Seide
REGISTRATION NUMBER: 32,
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: FILING DATE: 26-JAN
                                                                                                                                                                                                                                                                                                                                                          OPERATING SYSTEM:
SOFTWARE: FastSEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET: 30 Rockefeller Plaza CITY: New York
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                 TOPOLOGY:
                               STRANDEDNESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  212-408-2500
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                               single
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US-08-932-682-55
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                                                                                                                       Query Match
Best Local Similarity
Thes 7; Conserve
                                                                                                                                                                                     ; TOPOLOGY: 1i; MOLECULE TYPE: US-08-932-682-39
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Sequence 55, App. No. 59455(
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Best Local Similarity
Matches 7; Conser
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                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/08/932,682
FILING DATE: 18-SEP-1997
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/786,748
FILING DATE: 24-JAN-1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                            TELEFAX: 212-765-2519
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION: TELEPHONE: 212-705-5000
                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: FastSEQ Version 2.0 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES: 1
                                                                                                                                                                                                                                                                              TELEPHONE: 212-765-2519
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                                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: 32, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM CON OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PLICANT: Mietzner, Timothy A.
TLE OF INVENTION: NOVEL ANTIMICROBIAL PEPTIDES
                                                                                                                                                                                                                                                                                                                                                          NAME: Rochelle K. Seide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
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                                                                                1 RVIRVVRGACR 11
                                                                                                        1 RVVRVVRRVVR 11
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10112-0228
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New York
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30 Rockefeller Plaza
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                                                                                                                                                                                                               linear
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r, Timothy A.
                                                                                                                                               59.3%;
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Pred. No.
                                                                                                                                                 Score 32; DB Pred. No. 13;
                                                                                                                                    Mismatches
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GENERAL INFORMATION: APPLICANT: APPLICANT: APPLICANT:

Tencza, Sarah B. Mietzner, Timoth

Timothy A.

NOVEL ANTIMICROBIAL PEPTIDES

Montelaro C.

Application US/08932682

Tencza,

Sarah

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                                                          US-08-786-748A-39
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            Sequence 39, Application US/08786748A Patent No. 5714577
GENERAL INFORMATION:
                                                                                                                                                                                  Matches
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Best Local Similarity
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INFORMATION FOR SEQ ID NO:
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                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 21 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/0
FILING DATE: 24-JAN-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Ronald, Montelaro C.
APPLICANT: Tencza, Sarah B.
APPLICANT: Mietzner, Timothy A.
TITLE OF INVENTION: NOVEL ANTIMICROBIAL PEPTIDES
NUMBER OF SEQUENCES: 169
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                    TOPOLOGY: linear MOLECULE TYPE: No. 5714577e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM: MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/010,634
FILING DATE: 26-JAN-1996
ATTORNEY/AGENT INFORMATION:
APPLICANT: Ronald, Montelaro C.
                                                                                                                                                                                Local Similarity
les 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM CO. OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                   STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                         NAME: ROChelle K. Seide
REGISTRATION NUMBER: 32
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: FastSEQ Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: USA
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                                                                                                                                                   1 RVVRVVRRVVR 11
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New York
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3ER: AP30421
                                                                                                                                                                                                Score 32; DE
Pred. No. 13;
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Pred. No. 9.
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9.3;
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                                                                                                                                                                                                         Length 21;
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                                                                                                                                                                                                                                                                                                                           Patent No. 5714577
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE: 212-408-25
TELEFAX: 212-765-2519
INFORMATION FOR SEQ ID NO:
         SOFTWARE: FastSEQ Version 2.0 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/786,748A
                                                                                        ZIP: 10112-0228
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                            APPLICANT: Ronald, Montelaro C.
APPLICANT: Tencza, Sarah B.
APPLICANT: Mietzner, Timothy A.
TITLE OF INVENTION: NOVEL ANTIMICROBIAL PEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 24-JAN-
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
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ATTORNEY/AGENT INFORMATION:
NAME: Rochelle K. Seide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
COMPUTER: IBM Compat
OPERATING SYSTEM: DO
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/786,748A
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                                                       OPERATING SYSTEM:
                                                                                                                                                       CITY: New York
STATE: New York
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FILING DATE:
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Similarity 63.6%;
7; Conservative .
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INVENTION: NOVEL ANTIMICROBIAL PEPTIDES
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30 Rockefeller Plaza
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ER: AP30421
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Pred. No.
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SEQUENCE CHARACTERISTICS:
LENGTH: 17 amino acids
TYPE: amino acid
                                                          FILING DATE: 24-JAN-1997
ATTORNEY/AGENT INFORMATION:
NAME: ROCHOLLE K. Seide
REGISTRATION NUMBER: 32,300 ·
REFERENCE/DOCKET NUMBER: AP30
TELECOMMUNICATION INFORMATION:
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PRIOR APPLICATION DATA:
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SOFTWARE: FastSEQ Version 2.0
CURRENT APPLICATION DATA:
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ATTORNEY/AGENT INFORMATION:
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MEDIUM TYPE: Diskette
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APPLICANT: Tencza, Sarah B.
APPLICANT: Mietzner, Timothy A.
TITLE OF INVENTION: NOVEL ANTIMICROBIAL PEPTIDES
                                                                                                                                                                                          APPLICATION NUMBER: US/08/932,682 FILING DATE: 18-SEP-1997 CLASSIFICATION: 530
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                                                                                                                                                           APPLICATION NUMBER: 08/786,748
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CHARACTERISTICS:
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Pred. No.
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7.2;
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Query Match
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APPLICANT: Charter, Deborah
APPLICANT: de Kievit, Teresa
                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR
FILING DATE: 05-OCT-19
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 100
SOFTWARE: PatentIn Ver. 2.0
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CURRENT FILING DATE: 1997-04-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: No. 5994072el Proteins Involved in the TITLE OF INVENTION: of O-Antigen in Pseudomonas Aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILE REFERENCE: 6580-089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT ORGANISM: Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PPLICANT: Lam, Joseph S:
                                                                                                                                                                 NUMBER OF SEQUENCES: 10
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
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        SEQUENCE CHARACTERISTICS:
LENGTH: 15 amino acids
                                                                                                                                                                                                                                                                                     TITLE OF INVENTION:
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nes 7; Conserv
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TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                  APPLICATION NUMBER: FILING DATE:
                                                                                                                    CLASSIFICATION:
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6080724
: 15 amino acids amino acid
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50.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5994072el Proteins Involved in the Synthesis and Assembly
                                                                                   FR 95 11714
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Pred. No.
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Pred. No.
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Result
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Maximum DB
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Perfect score:
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    score greater than or equal to the score of the result beir and is derived by analysis of the total score distribution.
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seq length: 2000000000
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1 RVVRVVRRVVRR 12
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Maximum Match 100%
Listing first 45 summaries
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1: /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*

2: /cgn2_6/ptodata/1/iaa/6B_COMB.pep:*

3: /cgn2_6/ptodata/1/iaa/6B_COMB.pep:*

4: /cgn2_6/ptodata/1/iaa/6B_COMB.pep:*

5: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*

6: /cgn2_6/ptodata/1/iaa/pcTUS_COMB.pep:*
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Copyright (c) 1993 - 2003 Compugen Ltd.
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PCT-US95-00062-9
US-08-179-632-3
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US-09-144-085-2

US-08-179-632-22

US-08-440-174A-22

PCT-US95-00062-22

US-08-179-632-9

US-08-179-632-9
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US-08-846-762-16
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ALIGNMENTS

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Query Match Best Local Similarity ' Warches 8; Conservat RESULT 2 US-08-786-748A-30 US-08-846-762-16 TITLE OF INVENTION: No. 5994072el Proteins Involved in the Synthesis and TITLE OF INVENTION: of O-Antigen in Pseudomonas Aeruginosa FILE REFERENCE: 6580-089 CURRENT APPLICATION NUMBER: US/08/846,762A CURRENT FILING DATE: 1997-04-30 NUMBER OF SEQ ID NOS: 100 SOFTWARE: Patentin Ver. 2.0 SEQ ID NO 16 LENGTH: 320 TYPE: PRT Sequence 30, Application US/08786748A Patent No. 5714577 GENERAL INFORMATION: Sequence 16, Application US/08846762A Patent No. 5994072 GENERAL INFORMATION: APPLICANT: Ronald, Montelaro C. APPLICANT: Tencza, Sarah B. APPLICANT: Mietzner, Timothy A. TITLE OF INVENTION: NOVEL ANTIMICROBIAL PEPTIDES NUMBER OF SEQUENCES: 169 APPLICANT: Lam, Joseph S. APPLICANT: Burrows, Lori APPLICANT: Charter, Deborah APPLICANT: de Kievit, Teresa STATE: New York COUNTRY: USA ZIP: 10112-0228 COMPUTER READABLE FORM: MEDIUM TYPE: Diskette ORGANISM: Pseudomonas aeruginosa CORRESPONDENCE ADDRESS: ADDRESSEE: STREET: 30 CITY: New York 28 VIAVVRRVVER 2 VVRVVRRVVRR 12 B: Brumbaugh, Graves, 30 Rockefeller Plaza Conservative 38 68.5%; Score 37; Pred. No. Mismatches Donohue & Raymond DB 2; 27; 2 Length 320; Indels 0, Gaps

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GENERAL INFORMATION:

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; OTHER INFORMATION: Artificial peptide derived from HIV-1
US-09-785-058-7
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US-09-785-059-8
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                                                                                     APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID:NO 8
LENGTH: 48
TYPE: NEW TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME TO THE TIME 
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 8
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Patent No. US20020169279A1
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIIUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
CURRENT FILING DATE: 2001-02-16
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
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ORGANISM: Artifical sequence
FEATURE:
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TYPE: PRT
ORGANISM: Artificial Sequence
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Search completed: June Job time: 7.38298 secs
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US-09-785-058-8
                                                                                                                                                                                                 ; OTHER INFORMATION: Artificial peptide derived from HIV-1 US-09-785-058-8
                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/09/785;058
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FASTSEQ for Windows Version 3.0
SEQ ID NO 8
                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 8, Application US/09785058 Publication No. US20030036627A1 GENERAL INFORMATION:
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Best Local Similarity
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TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Ronald APPLICANT: Timoth
                                                                                                                                                                                                                                            LENGTH: 48
TYPE: PRT
ORGANISM: Artifical sequence
                                                                                                                                                                                                                                FEATURE:
                                                                                                                                  12;
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OTHER INFORMATION: Artificial peptide derived from HIV-1 US-09-785-058-6
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; OTHER INFORMATION: Artificial peptide derived from HIV-1 US-10-079-075-6
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CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.
SEQ ID NO 6
LENGTH - - -
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Best Local S
Matches 12
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APPLICANT: Timothy A. Mieczner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL |
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
SOFTWARE: PastSEQ for Windows Version 3.0
SEQ ID NO 6
                                                                                                                                                                                                                                                                            Sequence 6, Application US/09785058 Publication No. US20030036627A1 GENERAL INFORMATION:
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Publication No. US20020188102A1
GENERAL INFORMATION:
                                                                                      NUMBER OF SEQ ID NOS: 12
SOFTWARE: FRANCEQ for Windows Version 3.0
SEQ ID NO 6
LENGTH: 36
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Best Local Similarity
Matches 12; Conserv
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CURRENT FILING DATE: 2001-02-16
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
                                                   ORGANISM: Artifical sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: PRT ORGANISM: Artificial Sequence
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ORGANISM: Artifical
                                    FEATURE:
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ER: US/09/785,059
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Pred. No.
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Pred. No. 0.0032;
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LENGTH: 42
TYPE: PRT
ORGANISM: Artifical sequence
FEATURE:
OTHER INFORMATION: Artificial peptide derived from HIV-1
US-09-785-059-7
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NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
SEQ ID NO 7
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Best Local :
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
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CURRENT FILING DATE: 2001-02-16
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
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SOFTWARE: FastSEQ for Windows Version 3.0
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TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
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Similarity 100.0%; Pred. No. 0.0038;
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Pred. No. 0.0
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WS-09-785-058-7 US-09-785-058-7 / Sequence 7, Application US/09785058 / Publication No. US20030036627A1

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APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
ITILE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PER
FILE REFERENCE: A33577 / 072396.0217
CURRENT APPLICATION NUMBER: US/09/785,059
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 5
LENGTH: 24
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; OTHER INFORMATION: Artificial peptide derived from HIV-1
US-10-079-075-4
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Patent No. US20020169279A1
GENERAL INFORMATION:
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 4
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL
FILE REFERENCE: A 34001 / 072396.0222
CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
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ORGANISM: Artifical sequence
FEATURE:
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100.0%; Pred. No.
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                                  Score 54; DB 9;
Pred. No. 0.002;
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US-10-079-075-5
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US-09-785-059-6
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                                                 Sequence 6, Application US/09785059 Patent No. US20020169279A1 GENERAL INFORMATION:
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Best Local Similarity
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Publication No
                     APPLICANT: Ronald C. Montelaro APPLICANT: Timothy A. Mietzne:
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Timothy A. Mietzner
VENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
                     Mietzner
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CURRENT APPLICATION NUMBER: US/09/785,058
CURRENT FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 12
SOFTWARE: PastSEQ for Windows Version 3.0
SEQ ID NO 5
LENGTH: 24
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APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A 34001 / 072396.0222
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LENGTH: 24
TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 5, Application US/09785058 Publication No. US20030036627A1
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APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
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SOFTWARE: FastSEQ for Windows Version 3.0
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ORGANISM: Artifical sequence
FEATURE:
                                                                                                                                                          OTHER INFORMATION: Artificial peptide derived
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No. US20020188102A1
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Pred. No.
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Pred. No.
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Query
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1: /cgn2_6/ptodata/1/pubpaa/PCT
2: /cgn2_6/ptodata/1/pubpaa/PCT
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Listing first 45 summaries
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Copyright (c) 1993 - 2003 Compugen Ltd.
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cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*
cgn2_6/ptodata/1/pubpaa/US09_PUBCOMB.pep:*
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194.092 Million cell updates/sec
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US-10-079-075-5

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US-09-785-058-7

US-10-079-075-7

US-10-079-075-7

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pubpaa/PCT_NEW_PUB.pep:*
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| 32 | 32 | 32 | 32 | 32 | 32 | <u>ω</u> | ω u | 34 | 3 4 | 34 | 34 | 35 | 3 5 | ω 5 | 3 5 | 35 | ω 5 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 |
| • | • | 59.3 | • | • | | • | 61.1 | 63.0 | 63.0 | • | | | | | | 64.8 | 64.8 | 87.0 | 87.0 | 87.0 | 87.0 | 87.0 | 87.0 | 87.0 | 87.0 |
| 348 | 323 | 323 | 226 | 88 | 48 | 2462 | 868 | 535 | 485 | 147 | 147 | 31 | 31 | 31 | 28 | 28 | 28 | 48 | 48 | 48 | 36 | 36 | 36 | 24 | 24 |
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| US-09-804-291-165 | US-09-886-055-163 | US-09-804-291-163 | US-09-860-670-139 | US-09-738-626-5561 | US-10-083-357-1130 | US-09-819-104A-5 | US-09-938-406-1 | US-09-808-483-10 | US-09-808-483-12 | US-10-146-337-60 | US-10-137-765-60 | US-09-785-058-2 | US-10-079-075-2 | US-09-785-059-2 | US-09-785-058-1 | US-10-079-075-1 | US-09-785-059-1 | US-09-785-058-12 | US-10-079-075-12 | US-09-785-059-12 | US-09-785-058-11 | US-10-079-075-11 | US-09-785-059-11 | US-09-785-058-10 | US-10-079-075-10 |
| 165, | Sequence 163, App. | | Sequence 139, App | 5561 | 11: | Sequence 5, Appli | 1, Ag | e 10, App | e 12, | | 60, | Sequence 2, Appli | 'n | 2 | ۲, | ۲, | ٢ | 12 | 12 | 12, | 11 | e 11, | | Sequence 10, Appl | Sequence 10, Appl |

ALIGNMENTS

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; ORGANISM: Artifical sequence ; FEATURE: ; OTHER INFORMATION: Artificial peptide derived from HIV-1 US-09-785-059-4
                                                                                                                                                                                                  RESULT 2
US-10-079-075-4
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Sequence 4, Application US/10079075
Publication No. US20020188102A1
GENERAL INFORMATION:
APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A34001-A / 072396.0222
CURRENT APPLICATION NUMBER: US/10/079,075
CURRENT FILING DATE: 2002-02-19
NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 4, Application US/09785059
Patent No. US20020169279A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS: 12
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 4
LENGTH: 12
TYPE: PRT
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CURRENT FILING DATE: 2001-02-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Ronald C. Montelaro
APPLICANT: Timothy A. Mietzner
TITLE OF INVENTION: VIRUS DERIVED ANTIMICROBIAL PEPTIDES
FILE REFERENCE: A33577 / 072396.0217
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RESULT 15
AAU43929
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Best Local S
Matches 8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      polypeptides may be used as antigens in the production of antibodies specific for P. acnes proteins. These antibodies can be used to downregulate expression and activity of P. acnes polypeptides and therefore treat P. acnes infections. The acnes may also be used diagnostic agents for determining P. acnes presence, for example, by enzyme linked immunosorbent assay (ELISA).
                                                                                                                                                              21-APR-2000; 2000US-199047P.
02-JUN-2000; 2000US-208841P.
07-JUL-2000; 2000US-216747P.
                                                                                                                                                                                                                                                                                                                                                                               SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis; uveitis; endophthalmitis; bone; joint; central nervous system; ELISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay;
                             N-PSDB; AAS59521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             vaccinating against and diagnosing infections, especially useful for
                                              WPI; 2001-616774/71.
                                                                              L'maisonneuve
                                                                                                                                                                                                                                20-APR-2001; 2001WO-US12865.
                                                                                                                                                                                                                                                                 01-NOV-2001
                                                                                                                                                                                                                                                                                                  WO200181581-A2
                                                                                                                                                                                                                                                                                                                                 Propionibacterium acnes.
                                                                                                                                                                                                                                                                                                                                                                  dermatological; osteopathic; neuroprotectant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Propionibacterium acnes immunogenic protein #4825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27-FEB-2002
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                                                                                                                              (CORI-) CORIXA CORP
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                                                                            Mitcham JL, Wang SS, Jen S, Carter D;
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Propionibacterium acnes polypeptides and nucleic acids useful

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                                                                                                                       Example 1;
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polypeptides may be used as antigens in the production of antibodies specific for P. acnes proteins. These antibodies can be used to downregulate expression and activity of P. acnes polypeptides and therefore treat P. acnes infections. The antibodies may also be used diagnostic agents for determining P. acnes presence, for example, by enzyme linked immunosorbent assay (ELISA). pustulosis, hypertosis and osteomyelitis), uveitis and endophthalmitis. P. acnes is also involved in infections of bone, joints and the central nervous system, however it is particularly involved in the inflammatory lesions associated with acne vulgaris. A method for detecting the presence or absence of P. acnes in a patient comprises contacting a sample with a binding agent that binds to the proteins of the invention and determining the amount of bound protein in the sample. The Sequences AAU39105-AAU68017 represent Propionibacterium acnes immunogenic polypeptides. The proteins and their associated DNA sequences are used in at ftp.wipo.int/pub/published_pct_sequences. Note: specification, e treatment, prevention and diagnosis of medical conditions acnes. The disorders include SAPHO syndrome (synovitis, acr The sequence data for this patent did not fication, but was obtained in electronic for 165 format part of the printed directly from WIPO as γ̈́

Query Match Best Local S Matches 7 37 VTŘLVŘŘVVK 46 2 VVRVVRRVVR 11 Similarity 7; Conserv Conservative 70.0%; Score 34; DB 22; Length 165; Pred. No. 1.6e+02; Mismatches Indels 0, Gaps

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Sequence

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Search completed: June 9, 2003, Job time: 13.9362 secs 11:55:31

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02-JUN-2000;
07-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis; uveitis; endophthalmitis; bone; joint; central nervous system; EIISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay; dermatological; osteopathic; neuroprotectant.
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Propionipacterium acnes polypeptides and nucleic acids useful for
                                           WFN; 2001-616774/71.
N-PSDB; AAS59545.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Propionibacterium acnes immunogenic protein #10374
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; 2000US-216747P.
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e J, Zhang
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Pred. No. 1.9e+02;
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FFX@XSDDDDDDDDDDDDDDDDDDDDDDDX&
                                                                                                                                                                                                                polypeptides. The proteins and their associated DNA sequences are the treatment, prevention and diagnosis of medical conditions cape, acnes. The disorders include SAPHO syndrome (synovitis, acne,
                                                                                                                                                                                                                                         Sequences AAU39105-AAU68017 represent Propionibacterium acnes polypeptides. The proteins and their associated DNA sequences
                                                                                                                                                                                                                                                                                                 vaccinating against and diagnosing infections, especially useful for treating acne vulgaris -
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and determining the amount of bound protein in the sample. The polypeptides may be used as antigens in the production of antibodies specific for P. acnes proteins. These antibodies can be used to downregulate expression and activity of P. acnes polypeptides and therefore treat P. acnes infections. The antibodies may also be used diagnostic agents for determining P. acnes presence, for example, by enzyme linked immunosorbent assay (ELISA).

Note: The sequence data for this patent did not form part of the prin specification, but was obtained in electronic format directly from WI at fig. wipo.int/pub/published_pct_sequences. pustulosis, hypertosis and osteomyelitis), uveitis and endophthalmitis. P. acnes is also involved in infections of bone, joints and the central nervous system, however it is particularly involved in the inflammatory lesions associated with acne vulgaris. A method for detecting the presence or absence of P. acnes in a patient comprises contacting a sample with a binding agent that binds to the proteins of the invention and detections of the invention ot form part of the printed format directly from WIPO are used in λq

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Matches
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             1 RVVRVVRRVVRR 12
                           Similarity 7; Conser
RRIRIVRRWVOR
                           Conservative
                                 63.0%;
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Pred. No.
                           Mismatches
                                63;
                                         22;
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                                        Length 66;
                            Indels
                           0
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RESULT 14 AAU42114

AAU42114 standard; Protein; 82 Ą

AAU42114;

27-FEB-2002 (first entry)

Propionibacterium acnes immunogenic protein #3010.

SAPHO syndrome; synovitis; acne; pustulosis; hypertosis; osteomyelitis; uveitis; endophthalmitis; bone; joint; central nervous system; ELISA; inflammatory lesion; acne vulgaris; enzyme linked immunosorbent assay; dermatological; osteopathic; neuroprotectant.

Propionibacterium acnes.

WO200181581-A2

01-NOV-2001.

20-APR-2001; 2001WO-US12865

21-APR-2000; 2000US-199047P. 02-JUN-2000; 2000US-208841P. 07-JUL-2000; 2000US-216747P.

(CORI-) CORIXA CORP

Skeiky YAW, Persing DH, e J, Zhang

WPI; 2001-616774/71.

L'maisonneuve

Mitcham JL, Wang SS, , Jen S, Carter D;

Bhatia

Propionibacterium acnes polypeptides and nucleic acids useful for

| 14-MAY 1999 18-MAY 1999 19-MAY 1999 21-MAY 1999 21-MAY 1999 21-MAY 1999 22-MAY 1999 23-MAY 1999 24-MAY 1999 25-MAY 1999 26-JUN 1999 27-MAY 1999 28-MAY 1999 28-MAY 1999 28-MAY 1999 28-MAY 1999 28-MAY 1999 28-JUN 1999 28-JUN 1999 28-JUN 1999 28-JUN 1999 28-JUN 1999 28-JUN 1999 28-JUN 1999 28-JUN 1999 28-JUN 1999 28-JUN 1999 28-JUN 1999 29-JUN 1999 29-JUN 1999 21-JUN | 06-APR-1999; 08-APR-1999; 16-APR-1999; 11-APR-1999; 21-APR-1999; 23-APR-1999; 23-APR-1999; 28-APR-1999; 28-APR-1999; 30-APR-1999; 06-MAY-1999; 06-MAY-1999; 07-MAY-1999; 07-MAY-1999; 11-MAY-1999; 11-MAY-1999; |
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25-FEB-1999;
05-MAR-1999;
09-MAR-1999;
23-MAR-1999;
25-MAR-1999;
29-MAR-1999;
01-APR-1999;
                                                                                                                                                                                                                                                                                                     termination sequence.
                                                                                                                                                                                                                                                                                                                       Protein identification; signal transduction pathway; metabolic pathway; hybridisation assay; genetic mapping; gene expression control; promoter;
                                                                                                                                                   25-FEB-2000;
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                                                                                                                                                                                                                                                              Arabidopsis thaliana
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Similarity 45.5%;
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99US-0155408.

12-AUG-1999 13-AUG-1999 13-AUG-1999 16-AUG-1999 17-AUG-1999 20-AUG-1999 20-AUG-1999 20-AUG-1999 20-AUG-1999 23-AUG-1999 28-JUL-1999 02-AUG-1999 02-AUG-1999 02-AUG-1999 03-AUG-1999 04-AUG-1999 04-AUG-1999 05-AUG-1999 06-AUG-1999 06-AUG-1999 06-AUG-1999 09-AUG-1999 09-AUG-1999

10-SEP-1999 15-SEP-1999 15-SEP-1999 16-SEP-1999 20-SEP-1999 22-SEP-1999 23-SEP-1999 24-SEP-1999 28-SEP-1999 29-SEP-1999 21-JUL-1999 22-JUL-1999 22-JUL-1999 22-JUL-1999 22-JUL-1999 23-JUL-1999 23-JUL-1999 23-JUL-1999 23-JUL-1999 27-JUL-1999 27-JUL-1999 27-JUL-1999

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DE Aral

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KW Prot

KW Prot

KW hybi

KW tern

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CC Note: The sequence data for this patent did not appear in the printed CC at figuration, but was obtained in electronic format directly from WIPO at figure and produces.
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23-AUG-2000; 2000US-0649167.
                                                                                                                                                                             Protein identification; signal transduction pathway; metabolic pathway; hybridisation assay; genetic mapping; gene expression control; promoter;
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                    25-FEB-2000; 2000EP-0301439.
                                                         06-SEP-2000
                                                                                                                            Arabidopsis thaliana
                                                                                                                                                                                                                                     Arabidopsis thaliana protein fragment SEQ ID NO: 74852.
                                                                                                                                                                                                                                                                          18-OCT-2000
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RESULT 9
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  BX8X8X8X8X8X8X8X8X8
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31-MAR-2000; 2000US-0540217.
23-AUG-2000; 2000US-0649167.
11-OCT-2001
                                                                                                                                                                                                  Novel human
                                                                                                                                                                                                                                             18-FEB-2002
                                                                                                                                                                                                                                                                                                                                      ABG29023 standard; Protein; 804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to isolated polynucleotide (I) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 20; SEQ ID No 59159; 103pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          biodiversity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-639362/73.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-MAR-2001; 2001WO-US08631.
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                                            WO200175067-A2
                                                                                    Homo sapiens
                                                                                                                                 supplement;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  508
                                                                                                                              chromosome mapping; gene mapping; gene therapy; forensic;
upplement; medical imaging; diagnostic; genetic disorder.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                804 AA;
                                                                                                                                                                                              diagnostic protein #29014.
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                                                                                                                                                                                                                                          (first entry)
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72.7%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 37; DB 22;
Pred. No. 2.5e+02;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 804;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  polypeptide (II) sequences. (I) is useful as hybridisation probes, polymerase chain reaction (PCR) primers, oligomers, and for chromosome and gene mapping, and in recombinant production of (II). The polymucleotides are also used in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating disorders involving aberrant protein expression or biological activity. The polypeptide and polymucleotide sequences have applications in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits to assess biodiversity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and to produce other types of data and products dependent on DNA and amino acid sequences. ABG00010-ABG30377 represent novel human diagnostic amino acid sequences of the invention.

Note: The sequence data for this patent did not appear in the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutation responsible for genetic disorders or other traits and to assess
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      31-MAR-2000; 2000US-0540217.
23-AUG-2000; 2000US-0649167.
                                                                                                                                     Human; chromosome mapping; gene mapping; gene therapy; forension food supplement; medical imaging; diagnostic; genetic disorder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to isolated polynucleotide (I) and polypeptide (II) sequences. (I) is useful as hybridisation probes,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 20; SEQ ID No 59382; 103pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     biodiversity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-639362/73.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-MAR-2001; 2001WO-US08631
                                                                                                                                                                                          Novel human diagnostic protein #28656
                                                                                                                                                                                                                                18-FEB-2002
                                                                                                                                                                                                                                                                    ABG28665;
                                                                                                                                                                                                                                                                                                      ABG28665 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          at ftp.wipo.int/pub/published_pct_sequences.
                                                                   WO200175067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (HYSE-) HYSEQ INC.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                         RVVRVVRRVVR 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          804 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
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                                                                                                                                                                                                                                (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1;
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Pred. No. 2.5e+02;
1; Mismatches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 804;
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                                                                                                                                                        forensic;
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30-MAR-2001; 2001WO-US08631

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RESULT 6
AAW37363
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                                                  Query Match
Best Local S
Matches 8
                                                                                                                      This sequence comprises PsbK (WbpK), a Pseudomonas aeruginosa PAO1
C protein with dehydratase activity. Wzz (Rol), PsbA (WbpA), PsbB
C (WbpB), PsbC (WbpC), PsbB (WbpB), PsbE (WbpB), Rfc (Wzy), PsbF
C (WbpF), PsbG (WbpG), PsbH (WbpH), PsbI (WpsI), PsbJ (WbpJ), PsbF
C (WbpK), PsbM (WbpM) and PsbN (WbpM) (see AW37349-56 and AAW37357-65,
C respectively) are claimed. They are involved in the synthesis and
C claimed are: UvrB (AAW37366) involved in ultraviolet repair and
C claimed are: UvrB (AAW3737-58) involved in histidine synthesis. All
C these proteins are encoded by the B-band gene cluster (see AAT97221)
C of P. aeruginosa PAO1. Purified proteins can be obtained from
C transformed host cells and used to raise monoclonal or polyclonal
C antibodies. Such antibodies specifically recognise the B-band
C lipopolysaccharide and can be used in a claimed method for
C detecting P. aeruginosa in a sample, i.e. to diagnose infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 9
                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   O antigen; PsbK; WbpK; lipopolysaccharide; infection; diagnosis; antibody; dehydratase.
                                                                                                                                                                                                                                                                                                                                                           Pseudomonas aeruginosa B-band lipopolysaccharide gene cluster used for diagnosis of P. aeruginosa infection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          27-FEB-1997;
30-APR-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pseudomonas aeruginosa PAO1.
                                                                                                                                                                                                                                                                                                                                   Claim 8; Page 123; 195pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                   N-PSDB; AAT97221.
                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1997-549736/50.
                                                                                                                                                                                                                                                                                                                                                                                                                                         Burrows L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (UYGU-) UNIV GUELPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30-APR-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9741234-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PsbK (WbpK) protein involved in O-antigen synthesis and assembly
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8; Conserv
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9; Conserv
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                         VVRVVRRVVRR 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   standard; Protein; 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VVRVVRRLSRR 15
                                                                                                   320 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                         Charter D,
                                                  Conservative
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96US-0016510.
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81.8%;
                                                             68.5%;
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                                                              Score 37;
Pred. No.
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Pred. No. 14;
                                                 Mismatches
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                                                              99;
                                                                         BB
                                                                          18;
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                                                                         Length 320;
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RESULT 7

WO200175067-A2

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RESULT 8
ABG28800
ID ABG2
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Matches
                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                      The present sequence is given in a specification relating to a method of assaying for WbpM or its homologue in a sample. The method comprises incubating a sample suspected of containing WbpM or its homologue and a substrate containing UDP-N-acetylgalactosamine (GalNAc) and/or UDP-N-acetylglucosamine (GlcNAc), and quantifying the amount of UDP-GalNAc and UDP-GlcNAc in the sample after reaction, where an increase in UDP-GlcNAc reflects the presence of WbpM or its homologue. The assay can also be used to screen for inhibitors of WbpM. Antibodies can be used to detect WbpM or its homologues in a sample.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Assaying for WbpM or its homologues in a sample comprises incubating sample with a substrate containing UDP-N-acetylgalactosamine and/or UDP-N-acetylglucosamine where an increase in UDP-N-acetylglucosamine
                                                    Human; chromosome mapping; gene mapping; gene therapy; forensic; food supplement; medical imaging; diagnostic; genetic disorder.
                                                                                                                                                                                                                                                                                                                                                Sequence .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pseudomonas aeruginosa; WbpKO6; WbpM; UDP-N-acetylgalactosamine; GalNAc; UDP-N-acetylglucosamine; GlcNAc; epimerase; WbpM assay.
                                                                                                                     18-FEB-2002
                                                                                                                                               ABG28800;
                                                                                                                                                                         ABG28800 standard; Protein; 804 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 5; Fig 17; 63pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-PSDB;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB66450 standard; Protein; 331 AA
                        Homo sapiens
                                                                                           Nove1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-MAY-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pseudomonas aeruginosa.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pseudomonas aeruginosa WbpKO6 carrying N-terminal hexahistidine tag.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB66450;
                                                   food supplement;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      indicates the presence of WbpM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (UYGU-)
                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                         human diagnostic protein
                                                                                                                                                                                                                                         39 VIAVVRRVVER 49
                                                                                                                                                                                                                                                                  2 VVRVVRRVVRR 12
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                                                                                                                                                                                                                                                                                                                                                  331 AA;
                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                   (first entry)
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                                                                                                                                                                                                                                                                                                          Score 37;
Pred. No.
                                                                                           #28791
                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                        1e+02;
                                                                                                                                                                                                                                                                                                                       DB 22;
                                                                                                                                                                                                                                                                                               2
                                                                                                                                                                                                                                                                                                                       Length 331,
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| - JUN 199 - JUN | 01-JUN-1999; 03-JUN-1999; 04-JUN-1999; 07-JUN-1999; 08-JUN-1999; 10-JUN-1999; |
| 9000001394 9000001394 90000001394 90000001394 90000001394 90000001394 90000001394 90000001394 | 99US-0137222. 99US-0137528. 99US-0137502. 99US-0137724. 99US-0138094. 99US-0138540. |
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28-JUL-1999 02-AUG-1999 02-AUG-1999 02-AUG-1999 03-AUG-1999 04-AUG-1999 04-AUG-1999 05-AUG-1999 05-AUG-1999 06-AUG-1999 06-AUG-1999 06-AUG-1999 09-AUG-1999

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6-AUG-1999; 9-AUG-1999; 9-AUG-1999; 0-AUG-1999; 1-AUG-1999; 2-AUG-1999; 3-AUG-1999;

3-AUG-1999; 6-AUG-1999; 7-AUG-1999; 8-AUG-1999; 0-AUG-1999; 0-AUG-1999; 0-AUG-1999;

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05-MAR 1999

09-MAR 1999

23-MAR 1999

25-MAR 1999

26-MAR 1999

10-APR 1999

11-APR 1999

11-APR 1999

21-APR 1999

23-APR 1999

23-APR 1999

23-APR 1999

23-APR 1999

24-MAY 1999

14-MAY 1999

15-MAY 1999

16-MAY 1999

17-MAY 1999

18-MAY 1999

19-MAY 1999

21-MAY 1999
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9; Conserv
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99US-0130049

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Pred. No. 4.5;
1; Mismatches
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Example 102; Page 84; 119pp; English.

antimicrobial compound (I) which is a peptide

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RESULT 2
AAW05116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CC having 8-50 amino acids, a net charge of 4, a hydrophobic moment (microH) CC as a beta sheet which is 0.2 higher than its micro H as alpha helix, and CC pathogen, and substantially no membrane disrupting activity against a microbial CC mammalian cells. (I) is useful for inhibiting microbial activity against consumpting of the periode of the same a detectable membrane disrupting activity against a pathogen, and is cuseful for inhibiting non-microbial pathogenic activity also. (I) is also cuseful for killing human sperm. The peptides are also provided in the CC form of an expression vector comprising a nucleic acid encoding the CC form of an expression vector comprising a nucleic acid encoding the CC peptides. The peptides are useful for inhibiting the activity of CC and for inhibiting non-microbial pathogens such as algae, fungi or protozoa and for inhibiting non-microbial pathogens such as worms or arthropods, CC and as spermicides for humans as the sperm membrane is atypical of human CC infection or detecting sepsis. The peptides may act as binding molecules and are useful to purify a target from blood, for qualitative or CC and are useful to purify a target from blood, for qualitative or inaging. Also, they are useful as molecular weight markers, as mutrient CC source, as growth medium component for culturing microorganisms, as well cas a food ingredient for human consumption. The peptides have a greater CC alpha helical peptides. Sequences AAG65536-47 represent amino acid CC alpha helical peptides. Sequences AAG65536-47 represent amino acid CC sequences of antimicrobial peptides.
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                            Claim 3; Page 17; 63pp; English
                                                                                                                                                             Buckwalter BL,
                                                                                                                                                                                                                                     31-MAR-1995;
                                                                                                                                                                                                                                                                      15-MAR-1996;
                                                                                                                                                                                                                                                                                                                                              WO9630405-A1
                                                                                                                                                                                                                                                                                                                                                                                 Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAW05116;
New peptides are disclosed which,
                                                                   Peptide(s) mimicking a helical region of porcine somatotropin - in compositions to promote mammalian growth
                                                                                                                           WPI; 1996-485447/48.
                                                                                                                                                                                                                                                                                                                                                                                                                porcine somatotropin; pST; growth promoter; helical conformation
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Porcine somatotropin mimic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAW05116 standard; peptide; 17
                                                                                                                                                                                                 (AMCY ) AMERICAN CYANAMID CO
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6 RIIRIIRRIIRR 17
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by virtue of having certain
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Length 17

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RESULT 3 AAG13632 termination Protein identification; signal transduction pathway; metabolic pathway; hybridiaation assay; genetic mapping; gene expression control; promoter; AAG13632 standard; Protein; 48 Arabidopsis thaliana Arabidopsis thaliana protein fragment SEQ ID NO: 13198. 17-OCT-2000 AAG13632; (first entry)

EP1033405-A2 06-SEP-2000.

25-FEB-1999; 05-MAR-1999; 09-MAR-1999; 23-MAR-1999; 25-MAR-1999; 29-MAR-1999; 28-APR-1999; 30-APR-1999; 30-APR-1999; 23-APR-1999 23-APR-1999 08-APR-1999 06-APR-1999 01-APR-1999; 25-FEB-2000; 2000EP-0301439 21-APR-1999; 19-APR-1999 16-APR-1999 99US-0129845.
99US-0130477.
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99US-0132487. 99US-0127462. 99US-0128234. 99US-0128714. 99US-0121825. 99US-0123180. 99US-0123548. 99US-0126264. 99US-0126785. 99US-0125788

04-MAY-1999; 05-MAY-1999; 06-MAY-1999;

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Copyright (c) 1993 - 2003 Compugen Ltd.
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| ABG28665 | ABG29023 | ABG28800 | AAB66450 | AAW37363 | AAG09943 | AAG36558 | AAG13632 | AAW05116 | AAG65539 | ID |
| Novel human diagno | Novel human diagno | Novel human diagno | ••• | | Arabidopsis thalia | Arabidopsis thalia | Arabidopsis thalia | Porcine somatotrop | Peptide sequence u | Description |

Novel peptides having antimicrobial activity have positive charge to selectively disrupt microbial membranes, assume beta sheet structure membrane environment and are substantially amphipathic in beta sheet

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| CONCORDO | 1 | membrane environment and are substantially amphipathic in | Nover peptides naving antimicropial activity nave positive | Noted postable busine satisfactorial activities base specifican | WP1; 2001-565322/63. | | Blazyk JF; | | (UYOH-) UNIV OHIO. | | 15-FEB-2000; 2000US-0182495. | | 15-FEB-2001; 2001WO-US04822. | | 23-AUG-2001. | | WO200160162-A2. | • | Synthetic. | | ainin; PGla. | Antimicrobial; microbial membrane disrupter; gene therapy; | | Peptide sequence used in the course of the invention. | 30-NOV-2001 (IIISC EMCIY) . | / E : | FINE COURT | ANCESSO. | AAG65539 standard; peptide; 18 AA. | AAG65539 | THE TAIL THE THE TAIL THE TAIL THE TAIL THE TAIL THE TAIL THE TAIL THE TAIL THE TAIL THE THE THE THE T |

pathogen;

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SQ SEQUENCE 364 AA; 41674 MW; 2F1B38SC33722D3D CRC64;

Query Match 66.7%; Score 36; DB 5; Length 364;

Best Local Similarity 72.7%; Pred. No. 1.6e+02;

Matches 8; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

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Search completed: June 9, 2003, 12:01:03

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EMBL; AEO
Complete
SEQUENCE
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Wood D.W., Setubal J.C., Kaul R., Monks D.E., Kitajima J.P.,

Okura V.K., Zhou Y., Chen L., Wood G.E., Almeida N.F. Jr., Woo L.,

Chen Y., Paulsen I.T., Eisen J.A., Karp P.D., Bovee D. Sr.,

Chapman P., Clendenning J., Deatherage G., Gillet W., Grant C.,

Kutyavin T., Levy R., Li M.-J., McClelland E., Palmieri A.,

Raymond C., Rouse G., Saenphitmmachak C., Wu Z., Romero P., Gordon

Raymond S., Yoo H., Tao Y., Biddle P., Jung M., Krespan W., Perry M.

Gordon-Kamm B., Liao L., Kim S., Hendrick C., Zhao Z.-Y., Dolan M.

Gordon-Kamm B., Liao L., Kim S., Hendrick C., Zhao Z.-Y., Dolan M.

Chumley F., Tingey S.V., Tomb J.-F., Gordon M.P., Olson M.V.,

Wester E.W.;
                                                                                                                                                                                                                                                                                                                                                                                                                                             Goodner B., Hinkie G., Gattung S., Miller N., Blanchard M., Qurollo B., Goldman B.S., Cao Y., Askenazi M., Halling C., Mullin L. Houmiel K., Gordon J., Vaudin M., Iartchouk O., Epp A., Liu F., Wollam C., Allinger M., Doughty D., Scott C., Lappas C., Markelz B., Flanagan C., Crowell C., Gurson J., Lomo C., Sear C., Strub G., Cielo C., Slater S.;
                                                                                                                                                                                                                                                                                                                                                                                  "Genome sequence of the plant pathogen Agrobacterium tumefaciens C58."; Science 294:2323-2328(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Science 294:2317-2323(2001).
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AE010420; AAM02504.1;
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                                                                                                                                                                                                                                                                                                   24149 MW;
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alpha subdivision; Rhizobiaceae group;
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Pred. No. 93;
2; Mismatches
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Pred. No.
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Q17983;
Q1-NOV-1996
Q1-NOV-1996
Q1-MAR-2002
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01-JUN-2002 (TrE)
01-JUN-2002 (TrE)
Uncharacterized )
                                                                                                                        "Direct Submission.";
Submitted (SEP-2001) to the EMBL; U46671; AAA85747.1;
HSSP; P00503; IAJS.
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                          Pfam; PF00155; aminotran
PRINTS; PR00799; TRANSAMI
                                               InterPro; IPR004839; Aminotransf1/2
InterPro; IPR000796; Asptransf_sub.
Pfam; PF00155; aminotran_1_2; 1.
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STRAIN-BRISTOL N2;
MEDLINE-99069613; PubMed-9851916;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Nemat
Rhabditidae; Peloderinae;
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STRAIN=AV19 / DSM 6324 / JCM 9639;
MEDLINE=21927647; PubMed=11930014;
                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. STRAIN-BRISTOL N2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Caenorhabditis elegans.
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NCBI_TaxID=2320;
  Hypothetical
                                                                                                                                                                                                                               Waterston R.;
                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN-BRISTOL
                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Genome sequence of the nematode investigating biology. The C. ele Science 282:2012-2018(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    None;
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elegans
b) to the
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Caenorhabditis.
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Last annotation update)
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01-MAR-2001
01-JUN-2002
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01-OCT-2001 (TrEMBLrel. 18, Last sequence update)
01-UN-2002 (TrEMBLrel. 21, Last annotation update)
Probable conjugal transfer protein, Traa.
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                                                                                                                                                                                                                                           Kaneko T., Nakamura Y., Sato S., Asamizı Watanabe A., Idesawa K., Ishikawa A., Kakishida Y., Kiyokawa C., Kohara M., Mate Mochizuki Y., Nakayama S., Nakazaki N., Takeuchi C., Yamada M., Tabata S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A. STRAIN=MAFF303099;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bacteria; Proteobacteria; alpha subdivision; Phyllobacteriaceae; Mesorhizobium.
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                                                  EMBL; AP002996; BAB48437.1; -. InterPro; IPR005053; MobA_MobL. Pfam; PF03389; MobA_MobL; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=20442410; PubMed=10984542;
                                                                                                                                                                                     Mesorhizobium loti.";
                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=21082930;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Piam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR000328; Env GP41.
InterPro; IPR000777; GP120.
                                                                                                                                                          DNA Res.
                                                                                                                                                                                                                       "Complete genome structure
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PF00517; GP41; 1.
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                                                                                                                                                       7:331-338(2000).
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A
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                                                                                                                                                                                                                                                                                                                                                                    PubMed=11214968;
Sato S., Asamizu E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  , WW 66896.
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112159 MW;
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Last annotation update)
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... Kawashima K...
, Matsumoto M... Matsumoto S...
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ima K., Kimura
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       Query Match
Best Local S
Matches 7
SEQUENCE FROM N.A.

STRAIN-AVI9 DSM 6324 / JCM 9639;
STRAIN-AVI9 / DSM 6324 / JCM 9639;
MEDLINE-21927647; PubMed=11930014;
MISSAREV A.I., Mezhevaya K.V., Makarova K.S., Poi Shcherbinina O.V., Shakhova V.V., Belova G.I., A. Natale D.A., Rogozin I.B., Tatusov R.L., Wolf Y. Malykh A.G., Koonin E.V., Kozyavkin S.A.;

"The complete genome of hyperthermophile Methano; and monophyly of archaeal methanogens.";
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Best Local (
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Q8TVU7;
01-JUN-2002
01-JUN-2002
01-JUN-2002
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STRAIN—83(2) / M145;

Bentley S.D., Chater K.F., Cerdeno-Tarraga A.-M., Challis G.L.,

Thomson N.R., James K.D., Harris D.E., Quail M.A., Kieser H.,

Thomson N.R., James K.D., Harris D.E., Quail M.A., Kieser H.,

Harper D., Bateman A., Brown S., Chandra G., Chen C.W., Collins M.,

Cronin A., Fraser A., Goble A., Hidalgo J., Hornsby T., Howarth S.,

Huang C.-H., Kieser T., Larke L., Murphy L., Oliver K., O'Neil S.,

Rabbinowitsch E., Rajandream M.A., Rutherford K., Rutter S.,

Rabbinowitsch E., Rajandream M.A., Rutherford K., Rutter S.,

Seeger K., Saunders D., Sharp S., Squares R., Squares S., Taylor K.

Warren T., Wietzorrek A., Woodward J., Barrell B.G., Parkhill J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Complete genome sequence coelicolor A3(2).";
Nature 417:141-147(2002).
EMBL; AL357523; CAB93377.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Streptomyces coelicolor.
Bacteria; Firmicutes; Actinobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Putative integral SCO1497 OR SC9C5.
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01-OCT-2000
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                                                                                                                                                                                                                         NCBI_TaxID=2320;
                                                                                                                                                                                                                                                                                                Methanopyrus kandleri.
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8; Conserv
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72.7%;
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21, Last
21, Last
21, Specific
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Pred.
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Pred. No. 53;
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ed. No. 2.9e+02;
Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                             sequence update)
annotation update)
for M.kandleri, MK
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annotation update)
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                                                                       Wolf
                            Methanopyrus kandleri AV19
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                                                                         Stetter K.O.,
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                                                                                              r.v.,
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Q9HZ81;
01-MAR-2001
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SEQUENCE
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STRAIN-ATCC 15692 / PAO1;

MEDLINE=20437337; PubMed=10984043;

MEDLINE=20437337; PubMed=10984043;

Stover C.K., Pham X.-Q.T., Erwin A.L., Mizoguchi S.D., Warrener P., Stover C.K., Pham X.-Q.T., Erwin A.L., Mizoguchi S.D., Vaan Y., Stover R.L., Goltry L., Tolentino E., Westbrock-Wadman S., Yuan Y., Brody L.L., Coulter S.N., Folger K.B., Westbrock-Wadman S., Yuan Y., Smith K.A., Spencer D.H., Wong G.K.-S., Wu Z., Paulsen I.T., Smith K.A., Spencer D.H., Wong G.K.-S., Wu Z., Paulsen I.T., Reizer J., Saier M.H., Hancock R.E.W., Lory S., Olson M.V., "Complete genome sequence of Pseudomonas aeruginosa PAO1, an opportunistic pathogen.";

Nature 406:959-964(2000).
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DR0533.
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Bacteria; Proteobacteria;
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Science 286:1571-1577(1999).
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NCBI_TaxID=1299;
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01-FEB-1997
01-FEB-1997
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Viruses; Retroid viruses; Retroviridae;
NCBI_TaxID=11676;
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Submitted (NOV-1997) to the EN
EMBL; U50396; AAC45865.1; -
SEQUENCE 320 AA; 34419 MW;
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MEDLINE=20442410; PubMed=10984542;
MEDLINE=7 n Tack N., Carr J.K.,
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01-JUN-2002
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Barloy-Hubler F., Bowser L., Cappela N., Galibert F., Gouzy J.,
Gurjal M., Hong A., Huizar L., Hyman R.W., Kahn D., Kahn M.L.,
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SERAIN=16M / ATCC 23456 / BIOTYPE 1;

STRAIN=20020109; PubMed=11755688;

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Ivanova N., Anderson I., Bhattacharyya A., Lykidis A., Rez
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Haselkorn R., Kyrpides N., Overbeek R.;

"The genome sequence of the facultative intracellular path
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Bacteria; Proteobacteria; alpha
Rhizobiaceae; Sinorhizobium.
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Brucellaceae; Brucella.
NCBI_TaxID=29459;
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A; PPO0672; HAMP; 1.

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AA; S9996 MW; 1
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AIDS;
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Gao F., Morrison S.G., Robertson D.L.,
Karlsson G., Sodroski J., Morgado M., (
von Briesen H., Beddows S., Weber J.,
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pfam; pF00809; Pterin bind; 1.
pROSITE; PS00792; DHPS 1; UNKNOWN 1.
PROSITE; PS00793; DHPS 2; 1.
Transferase; Complete proteome.
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EMBL; U04908; AAB05049.1; -.
InterPro; IPR000328; Env. GP41.
InterPro; IPR000777; GP120.
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NCBI_TaxID=11676;
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                                                                                                                                                                 SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hahn B.H.;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Virol.
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                                                                                                                                                                                  Coat
                                                                                                                                                                                                       PF00517; GP41;
                                                                                                                                                                                                                    PF00516; GP120;
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8; Conserv
                                                                              Similarity 7; Conserv
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867 AA;
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(TrEMBLrel.
(TrEMBLrel.
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                                                                                                                                                                                                                                                                                                                                                                                        1 Program;
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                                                                                                                                                               Glycoprotein; Polyprotein; Transmembrane 98632 MW; F0780669D709D596 CRC64;
                                                                                                   70.4%;
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Retroviridae;
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Last annotation update)
                                                                              Score 38; DB
Pred. No. 1.7e
3; Mismatches
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1.7e+02;
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Result
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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Perfect score:
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                                                                                                                                                                                                                      Score
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Match Length DB
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54
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   SPTREMBL_21:*
1: sp_archea:*
2: sp_bacteria:*
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Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                              sp_rodent:*
sp_virus:*
sp_vertebrate:*
sp_unclassified:*
sp_rvirus:*
sp_bacteriap:*
sp_archeap:*
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sp_phage:*
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    invertebrate:*
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   2351
561
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867
216
216
316
320
856
1015
1211
1211
2214
364
 Q9E1S5
Q98LM6
Q9KXQ3
Q8TVU7
Q8U6Q3
Q8TW69
Q17983
Q9LUU7
                                                                                                    Q9RWY2
Q9HZ81
P72144
Q9E1S4
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Q92YM6
Q8YH48
Q74749
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O23372 arabidopsis
Q927m6 rhizobium m
Q89h48 brucella me
Q74749 human immun
Q9rwy2 deinococcus
Q9h281 pseudomonas
P72144 pseudomonas
P72144 pseudomonas
Q9els4 human immun
Q9els5 human immun
Q9els5 human immun
Q9els6 human immun
Q9els6 human immun
Q9els6 human immun
Q9els7 streptomyce
Q8tvu7 methanopyru
Q8tv63 screptomyce
Q8tvu7 methanopyru
Q8tw63 agrobacteri
Q8tw69 methanopyru
Q17983 caenorhabdi
Q9luu7 arabidopsis
                                                                                                                                                                                                                    Description
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| 63.0 153 6 | 68 2 | .63.0 56 | 63.0 56 | 63.0 56 | 63.0 56 | 63.0 56 15 | 63.0 56 15 | 64.8 1124 4 | 64.8 1015 16 | 64.8 874 | 64.8 870 | 64.8 868 | 64.8 862 | 64.8 862 | 64.8 858 | 64.8 838 | 64.8 732 | 64.8 | 64.8 247 12 | 64.8 237 2 | 64.8 125 16 | 64.8 117 17 | 64.8 87 2 | 66.7 1677 | 66.7 852 | 66.7 841 | 66.7 838 | 66.7 740 5 (|
|-------------------|--------------------|----------|--------------------|---------|---------|--------------------|------------|--------------------|--------------------|----------|----------|----------|----------|----------|-------------------|----------|----------|--------|-------------------|-----------------------|-------------|-------------------|--------------------|--------------------|----------|----------|--------------------|--------------------|
| Q95L19 ÷ | Q9EVQ1 | 056194 | 056193 | 056192 | 056191 | 056189 | 056188 | 29Y6S2 | Q98B51 | 012003 | 012011 | 012009 | 012010 | 012004 | Q87628 | Q8UTC7 | Q9XE45 | Q9CD61 | Q84507 | 067996 | Q99QI0 | Q9V1Z0 | Q44954 | 070373 | Q69992 | 041556 | Q9DVL4 | Q21426 |
| Q95119 sus scrofa | Q9evq1 escherichia | human | 056193 human immun | human | human | O56189 human immun | 8 human | Q9y6s2 homo sapien | Q98b51 rhizobium l | - | | | | | Q87628 chimpanzee | | - | | Q84507 paramecium | $\boldsymbol{\sigma}$ | | Q9v1z0 pyrococcus | Q44954 bacillus br | O70373 mus musculu | | human | Q9dvl4 human immun | Q21426 caenorhabdi |

ALIGNMENTS

RESULT 1 023372

DATT TO BE

O23372; PRELIMINARY;
O23372;
01-JAN-1998 (TrEMBLrel. 0
01-JAN-1998 (TrEMBLrel. 0
01-DEC-2001 (TrEMBLrel. 1
Hypothetical protein.
AT4G15180;

19,

Created)
Last sequence update)
Last annotation update)

PRELIMINARY;

PRT;

2351 B

| % # Q | OC CCC RRA RRA DR RRA D | တ္တန္ |
|--|--|--|
| Query Match 79.6%; Score 43; DB 10; Best Local Similarity 58.3%; Pred. No. 61; Matches 7; Conservative 5; Mismatches | | OS Arabidopsis thaliana (Mouse-ear cress). |
| Length 2351; | phyta; Tracheophyta; ore eudicots; Rosipsis. Pohl T., Terryn N., James R., Lerroft A., Lerroft I., Mewes H. latabases. Ratabases. Ratabases. | |
| | yn N Wes | |
| Gaps | H.W., | |
| 0; | • | |

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RESULT 15
Y724_METTH
Best
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            between the Swiss Institute of Bioinformatics and the E the European Bioinformatics Institute. There are no rest use by non-profit institutions as les content modified and this statement is not removed. Usage by an entities requires a license agreement (See http://www.isb-or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRINTS; PR00046; SIGMA70FCT.

PROSITE; PS00715; SIGMA70 1; 1.

PROSITE; PS00716; SIGMA70 2; 1.

Transcription regulation; Sigma factor; DNA-directed RNA polymerase;
                                                                                                                                                                                                Smith D.R., Doucette-Stamm I.A., Deloughery C., Lee H.-M., Dubois Aldredge T., Bashirzadeh R., Blakely D., Cook R., Gilbert K., Harrison D., Hoang L., Keagle P., Lumm W., Pothier B., Qiu D., Spadafora R., Vicare R., Wang Y., Wierzbowski J., Gibson R., Jiwani N., Caruso A., Bush D., Safer H., Patwell D., Prabhakar S., McDougall S., Shimer G., Goyal A., Pietrovski S., Church G.M., Daniels C.J., Mao J.-I., Rice P., Noelling J., Reeve J.N.; "Complete genome sequence of Methanobacterium thermoautotrophicum deltaH; functional analysis and comparative genomics."; J. Bacteriol. 179:7135-7155(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15-JUL-1998
15-JUL-1998
16-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA-binding.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR000943; Sigma_70.
Pfam; PP00140; Sigma70; 1.
PRINTS; PR00046; SIGMA70FCT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; M90410; AAA26762.1; ALT_INIT. HSSP; P00579; ISIG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <del>:</del>
                                                    This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EW the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content modified and this statement is not removed. Usage by and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA_BIND
                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN=Delta H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Methanobacterium thermoautotrophicum.
Archaea; Euryarchaeota; Methanobacteria; Methanobacteriales;
Methanobacteriaceae; Methanothermobacter.
                entifies requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=98037514; PubMed=9371463;
                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hypothetical
MTH724.
                                                                                                                                                                               - i - SIMILARITY: BELONGS TO THE UPF0020 FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=187420;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FUNCTION: THE SIGMA FACTOR IS AN INITIATION FACTOR THAT PROMOTES ATTACHMENT OF THE RNA POLYMERASE TO SPECIFIC INITIATION SITES AND THEN IS RELEASED. THIS IS THE PRIMARY SIGMA-FACTOR OF THIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             METTH
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(Rel. 36, Last sequence update)
(Rel. 40, Last annotation update)
1 protein MTH724.
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297 H
35616 MW;
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Pred. No. 55;
3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 POLYMERASE CORE BINDING (POTENTIAL).
H-T-H MOTIF (BY SIMILARITY).
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                                                                        There are no restrictions ong as its content is in
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                                                                                                                      gh a collaboration -
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InterPro; IPRO02051; RNA methylase.
InterPro; IPRO00051; SAM_bind.
InterPro; IPRO00051; THUMP dom.
Pfam; PF01170; UPF0020; 1.
Pfam; PF02926; THUMP; 1.
Pfam; PF02926; THUMP; 1.
Pfam; PF02926; THUMP; 1.
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PROSITE; PS00092; N6 MTASE; UNKNOWN_1.
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328 RVIRVIERV
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                                                               Similarity
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Search completed: June 9, 2003, 11:56:36 Job time: 4.42553 secs.

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RESULT 13
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                                                                                                                                                                                                                                                   Pfam; PF00252; Ribosomal L16; 1.
PRINTS; PR00060; RIBOSOMALL16.
TIGRPAMS; TIGR01164; TpIP bact; 1.
PROSITE; PS00586; RIBOSOMAL L16 1; 1.
PROSITE; PS00701; RIBOSOMAL L16 2; 1.
Ribosomal protein; Mitochondrion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Wolff G., Plante I., Lang B.F., Kueck U., Burger G., "Complete sequence of the mitochondrial DNA of the chlorophyte Prototheca wickerhamii. Gene content and genome organization.", Mol. Biol. 237:75-86(1994).
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NCBI_TaxID=3111;
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Eukaryota; Viridiplantae;
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IPR000114; Ribosomal_L16.
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Pred. No. 22;
2; Mismatches
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InterPro; IPR004556; HemK.
InterPro; IPR002052; N6_Mtase.
InterPro; IPR000051; hemW bind.
TIGRFAM6; TIGR00536; hemW fam; 1
PROSITE; PS00092; N6_MTASE; 1.
Hypothetical protein; Transferas
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P27785;
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MEDLINE=20406833; PubMed=10952301;
Heidelberg J.F., Eisen J.A., Nelson W.C., Clayton R.A., Gwinn M.L.,
Dodson R.J., Haft D.H., Hickey E.K., Peterson J.D., Umayam L.A.,
Gill S.R., Nelson K.E., Read T.D., Tettelin H., Richardson D.,
Gill S.R., Nelson K.E., Read T.D., Tettelin H., Dragoi I., Sellers
Ermolaeva M.D., Vamathevan J., Bass S., Qin H., Dragoi I., Sellers
McDonald L., Utterback T., Fleischmann R.D., Nierman W.C., White O.
Salzberg S.L., Smith H.O., Colwell R.R., Mekalanos J.J., Venter J.C
Kormanec J., Farkasovsky M., Potuckova L.;
"Four genes in Streptomyces aureofaciens containing characteristic of principal sigma factors.";
Gene 122:63-70(1992).
                                                           SEQUENCE FROM N.A.
MEDLINE=93083996; PubMed=1452038;
Kormanec J., Farkasovsky M., Potuckova
                                                                                                                                                                         Streptomyces aureofaciens.
Bacteria; Actinobacteria; Actinobacteria; Actinobacteria; Actinomycetales; Streptomycineae;
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01-OCT-1996
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STRAIN=El Tor N16961 /
                                                                                                                                                                                                                                                                   RNA polymerase
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-!- CATALYTIC ACTIVITY: S-adenosyl-L-methionine + DNA adenosyl-L-homocysteine + DNA 6-methylaminopurine.
-!- SIMILARITY: BELONGS TO THE N6-METHYLTRANSFERASE FA
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Klenk H.-P., Clayton R.A., Tomb J.-F., White O., Nelson K.E., Ketchum K.A., Dodson R.J., Gwinn M., Hickey E.K., Peterson J.D., Richardson D.L., Kerlavage A.R., Graham D.B., Kyrpides N.C., Fleischmann R.D., Quackenbush J., Lee N.H., Sutton G.G., Gill S., Kirkness E.F., Dougherty B.A., McKenney K., Adams M.D., Loftus B., Peterson S., Reich C.I., McNeil L.K., Badger J.H., Glodek A., Zhou Overbeek R., Gocayne J.D., Weidman J.F., McDonald L., Utterback T. Cotton M.D., Spriggs T., Artiach P., Kaine B.P., Sykes S.M.,
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Pfam; PF03186; CobD; 1.
TIGRPAMs; TIGR00380; cbiB; 1.
Cobalamin biosynthesis; Transmembrane;
Cobalamin biosynthesis; POTENTIAL.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
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-!- FUNCTION: INVOLVED IN COBINAMIDE. ADDITION (
                                                                                         STRAIN=VC-16 / DSM 4304 / ATCC 49558;
MEDLINE=98049343; PubMed=9389475;
Klenk H.-P., Clayton R.A., Tomb J.-F.,
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Mason T.M.,
Venter J.C.;
                                                                                                                                                STRAIN=Orange-red; TISSUE=Testis;
Tamura M., Yamamoto H., Onitake K.;
"Cloning of protamine cDNA of the medaka
expression during spermatogenesis.";
Dev. Growth Differ. 36:419-425(1994).
                                                                                                                                                                                                                                                   Oryzias latipes (Medaka fish) (Japanese rices
Eukaryota, Metazoa, Chordata, Cranilata; Eutel
Actinopterygii, Neopterygii, Teleostei, Butel
Acanthomorpha, Acanthopterygii, Percomorpha,
Beloniformes, Adrianichthyidae, Oryziinae, On
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PROSITE; PS01234; GATB; 1.

Hypothetical protein; Complete proteome.

SEQUENCE 613 AA; 69023 MW; 38B139182E87E529 CRC64;
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Pfam; PF02637; DUF186; 1.
Pfam; PF02934; GatB_N; 1.
Pfam; PF02938; GAD; 1.
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Oryzias latipes (Medaka fish)
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                                s SWISS-PROT entry is copyright. It is produced through a ween the Swiss Institute of Bioinformatics and the EMBL European Bioinformatics Institute. There are no restrict
                                                                                 SPERM DNA INTO A HIGHLY CONDENSED, SUBCELLULAR LOCATION: Nuclear. TISSUE SPECIFICITY: Testis.
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15-JUN-2002
15-JUN-2002
SEQUENCE OF 225-310 FROM N.A. SPECIES=S.typhi; STRAIN=Ty2; MEDLINE=90218018; PubMed=2182
                                                                                      SPECIES=S.typhi; STRAIN=CT18;
MEDLINE=21534947; PubMed=11677608;
Parkhill J., Dougan G., James K.D., Thomson N.R., Pickard D., Wain (Churcher C., Mungall K.L., Bentley S.D., Holden M.T.G., Sebaihia M., Baker S., Basham D., Brooks K., Chillingworth T., Connerton P., Eronin A., Davis P., Davies R.M., Dowd L., White N., Farrar J., Cronin A., Davis P., Davies R.M., Dowd L., White N., Farrar J., Feltwell T., Hamlin N., Haque A., Hien T.T., Holroyd S., Jagels K., Krogh A., Larsen T.S., Leather S., Moule S., O'Gaora P., Parry C., Quail M., Rutherford K., Simmonds M., Skelton J., Stevens K., Whitehead S., Barrell B.G.;
                                                  "Complete genome sequence of a enterica serovar Typhi CT18."; Nature 413:848-852(2001).
                                                                                                                                                                                                                                                                                         McClelland M., Sanderson K.E., Spieth J., Clifton S.W., Latre Courtney L., Porwollik S., Ali J., Dante M., Du F., Hou S., L. Leonard S., Nguyen C., Scott K., Holmes A., Grewal N., Mulvan Ryan E., Sun H., Florea L., Miller W., Stoneking T., Nhan M., Waterston R., Wilson R.K.;
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SPECIES-S.typhimurium; STRAIN=LT2
MEDLINE=21534948; PubMed-11677609;
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Hypothetical protein; Transferase.
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InterPro; IPR000051; SAM bind.
TIGRFAMS; TIGR00536; hemK fam;
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                                                                                                                                                                                                                                                                            Complete
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L; D90864; BAA16188.1; ALT_INIT.
L; D90863; BAA16186.1; -
L; M27714; -; NOT_ANNOTATED_CDS.
L; Y00720; -; NOT_ANNOTATED_CDS.
L; M33021; -; NOT_BNNOTATED_CDS.
L; M33021; -; NOT_BNNOTATED_CDS.
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                                                                                                                                                                                                                                                                              genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    310 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (Rel. 31, Created)
(Rel. 41, Last sequence up
(Rel. 41, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                s a license agreement (S
to license@isb-sib.ch).
                                                                                                                                                                                                                                                                              sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    35001 MW;
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Pred. No.
                                                                                                                                                                                                                                                                              Salmonella
                                                                           multiple
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3EE8F2D45AFC3760 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                        subdivision;
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                                                                           gurb
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                                                                           resistant
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                                                                                                                                                                                                                                                                                                                  S.W., Latreille P.,
., Hou S., Layman D.,
l N., Mulvaney E.,
                                                                            Salmonella
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CBIB SATTY

ID CBIB S

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AC CBIB OO OO Salmon

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Q05600;
01-JUN-1994
                                                                                                    Roth J.
Church
                                       of Salmonella
J. Bacteriol.
                                                                                                                                                                                                                                                                      Salmonella typhimurium.
Bacteria; Proteobacteria;
                                                                                                                                                                                                                                                                                                                    CbiB protein.
CBIB OR STM2034.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR004556; HemK.
InterPro; IPR002052; N6 Mtase.
InterPro; IPR000051; SM bind.
TIGRPAMs; TIGR00536; hemK fam;
PROSITE; PS00092; N6 MTASE; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; AE008807; AAL21286.1; -.
EMBL; A270274; CAD07617.1; -.
EMBL; M2715; -; NOT ANNOTATED_CDS.
StyGene; SG?????; yfcB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced between the Swiss Institute of Bioinformatics and the European Bioinformatics Institute. There are ruse by non-profit institutions as long as its comodified and this statement is not removed. Usage entities requires a license agreement (See http://worsend an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Isolation, characterizati
genes encoding chorismate
Escherichia coli.";
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15-JUN-2002
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MEDLINE=95075659; PubMed=7984428;
  SEQUENCE FROM N.A.
                                                                                   "Characterization of the
                                                                                                                                           MEDLINE=93273696; PubMed=8501034;
                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                            NCBI_TaxID=602;
                                                                                                                                                                                                                                                         Salmonella.
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175:3303-3316(1993)
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                                                                                                                                                                                                                                                                                                                                                           29, Created)
29, Last sequence 41, Last annotations
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                                                                                   cobalamin
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                                                                                                                                                                                                                                                                                                                                                           sequence update) annotation updat
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                                                                                                                                                                                                                                                                            subdivision;
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                                                                                   B12)
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RESULT 6
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Matches 6
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                                                                                                          Transferase; |
NP_BIND
SEQUENCE 21:
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                                                                                                                                                                                                                                                                                                                                                                                "Complete genome sequence of the alkaliphilic bacterium B halodurans and genomic sequence comparison with Bacillus Nucleic Acids Res. 28:4317-4331(2000).

-I- CATALYTIC ACTIVITY: ATP + uridine = ADP + UMP.
-I- CATALYTIC ACTIVITY: ATP + cytidine = ADP + CMP.
-I- PATHWAY: Pyrimidine salvage pathway.
-I- SUBCELLULAR LOCATION: Cytoplasmic (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
STRAIN-C-125 / JCM 9153;
MEDLINE=20512582, PubMed=11058132;
Takami H., Nakasone K., Takaki Y., Maeno G., S:
Fuji F., Hirama C., Nakamura Y., Ogasawara N.,
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Ribosomal protein.
179 179
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-UN-2002 (Rel. 41, Created)
15-UN-2002 (Rel. 41, Last sequence update)
15-UN-2002 (Rel. 41, Last annotation update)
Uridine kinase (EC 2.7.1.48) (Uridine monophosphokinase) (Cytidine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q9KDD8;
15-JUN-2002
                                                                                                                                                                                                                                                         entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bacillus halodurans.
Bacteria; Firmicutes;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      monophosphokinase).
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                                                                                                                                                PRINTS; PR00478; PHRIBLKINASE.
PRINTS; PR00988; URIDINKINASE.
TIGRFAM8; TIGR00235; udk; 1.
                                                                                                                                                                                          InterPro; IPR001324; PRK.
InterPro; IPR000764; Uridine_kin.
Pfam; PF00485; PRK; 1.
                                                                                                                                                                                                                               EMBL; AP001511; BAB04994.1; -.

    -!- SUBCELLULAR LOCATION: Cytoplasmic (By similarity).
    -!- SIMILARITY: BELONGS TO THE URIDINE KINASE FAMILY.

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Horikoshi K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=86665;
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 137
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5; Conserv
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IRIIRRMVR
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                                                                                                                          Kinase;
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                                                                                                          24387 MW;
                                                                  63.0%;
                                                                                                                       ATP-binding; Complete proteome.
19 ATP (POTENTIAL).
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                                                   Score 34; DB 1
Pred. No. 24;
4; Mismatches
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Pred. No.
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; 4AF506393E526216 CRC64;
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., Kuhara S
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                                                                              Length 211;
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RESULT 7
YFCB ECOLI STANDARD; PRT; 31
ID TYCEB ECOLI STANDARD; PRT; 31
AC P39199; P78252; P76939;
DT 01-FEB-1995 (Rel. 31, Created)
DT 16-OCT-2001 (Rel. 40, Last sequence up.
DT 16-OCT-2011 (Rel. 40, Last annotation
DT 16-OCT-2011 (Rel. 40, Last annotation
DT 16-OCT-2011 (Rel. 40, Last annotation
                                                                                                                                                       SEQUENCE OF 172-310 FROM N.A.

MEDLINS=90218018; PubMed=2182772;

Charles I.G., Lamb H.K., Pickard D., Dougan G., Hawkins Pisolation, characterization and nucleotide sequences of genes encoding chorismate synthase from Salmonella typhi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Construction of a contiguous 874-kb sequence of the Escherichi - K12 genome corresponding to 50.0-68.8 min on the linkage map analysis of its sequence features."; DNA Res. 4:91-113(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yamamoto Y., Aiba H., Baba T., Hayashi K., Inada T., Isono K Itoh T., Kimura S., Kitagawa M., Makino K., Miki T., Mitsuha Mizobuchi K., Mori H., Nakade S., Nakamura Y., Nashimoto H., Oshima T., Oyama S., Saito N., Sampei G., Satoh Y., Sivasund Tagami H., Takahashi H., Takeda J., Takemoto K., Uehara K., Yamagata S., Horiuchi T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Blattner F.R., Plunkett G. III, Bloch C.A., Perna N.T., Burland V., Riley M., Collado-Vides J., Glasner J.D., Rode C.K., Mayhew G.F., Gregor J., Davis N.W., Kirkpatrick H.A., Goeden M.A., Rose D.J., Mau B., Shao Y.;
                                                                                                                                                                                                                                                                                                                     MEDLINE=95075659; PubMed=7984428;
Borodovsky M., Rudd K.E., Koonin E.\
"Intrinsic and extrinsic approaches"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 genes encoding chorismate 
Escherichia coli.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=K12 / MG1655;
MEDLINE=97426617; PubMed=9278503;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         White P.J., Millar G., Coggins J.R.; "The overexpression, purification and complete amino acid sequence chorismate synthase from Escherichia coli K12 and its comparison withe enzyme from Neurospora crassa."; Biochem. J. 251:313-322(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
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This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Etter European Bioinformatics Institute. There are no rest the European Bioinformatics Institute as long as its content use by mon-profit institutions as long as its content
                                                                                                                                                                                                                                                                                              bacterial genome.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN-K12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE OF
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=88293429; PubMed=2969724;
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                                                                                                                                    FRAMESHIFTS.
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                                                                                                                                                                                                                                                                                              E.V.;
hes for detecting
                                                     It is produced through a collaboration - informatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             update)
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Mitsuhashi N.,
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RESULT REPARATE STATES OF THE 
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Best Local :
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01-JAN-1990 (Re)
01-JAN-1990 (Re)
15-JUN-2002 (Re)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LT 5
                                                                                                                                                                                                                            MEDLINE=93185086; PubMed=8095182;
Henry J.L., Coggin D.L., King C.R.;
"High-level expression of the ribosomal
tumors that overexpress erbB-2.";
Cancer Res. 53:1403-1408(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VI-VAN-1990 (Rel. 13, Last sequence up 15-JUN-2002 (Rel. 41, Last annotation 60S ribosomal protein L19.
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CHAIN
PROPEP
MEDLINE=91090840; PubMed=1702292;
Nakamura T., Onno M., Mariage-Samson
"Nucleotide sequence of mouse L19 ril
                                                                                                                                                SPECIES=Human;
Strausberg R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SITE
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                                                               SEQUENCE FROM N.A. SPECIES=Mouse;
                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=92285147; PubMed=1598220;
Kumabe T., Schma Y., Yamamoto T.;
"Human cDNAs encoding elongation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus (Mouse), and Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                            SPECIES=Human
                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
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1 26 BY SIMILARITY.

27 41 LATE L2 MU CORE PROTEIN

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42 70 BY SIMILARITY.
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                                                                                                                                                                        TISSUE=Muscle;
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CLEAVAGE (BY ADENOVIRUS PROTEASE)
(POTENTIAL).
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son R., Hillova J., ribosomal protein o
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7.2;
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  cDNA isolated
                     Hill M.;
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RC SPECIES-Mouse; STRAIN-C57BL/6J;
RX MEDLINE-21085660; PubMed-11217B1;
RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Kawai J., Shinagawa A., Shibata K., Konno H., Adachi J., Fukuda S.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Kasukawa T., Saito R.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Aizawa K., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA Aizawa K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Fleischmann W., Gaasterland T., Gissi C., King B., Kochiwa H.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
RA Sasaki M., Satubi F., Suchenbach C., Seya T., Shibata Y., Storch K.-F.,
RA Mynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
RA Mynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
RA Mynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                EMBL; X63527; CAA45090.1; -.
EMBL; S56985; AAB25672.1; -.
EMBL; BC000530; AAH00530.1; -.
EMBL; BC013016; AAH13016.1; -.
EMBL; M62952; AAB48630.1; -.
EMBL; AK010440; BAB26941.1; -.
EMBL; AC010710; AAH10710.1; -.
EMBL; BC010710; AAH10710.1; -.
EMBL; BC010710; AAH10710.1; -.
EMBL; X02202; CAA57685.1; -.
EMBL; X02202; CAA57685.1; -.
PIR; X02560; RSRT19.
PIR; A36554; A36554.
PIR; S22656; S22656.
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                                                                                                                                                                                                                                                                                                           use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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Genomics 25:372-380(1995)
-!- SIMILARITY: BELONGS T
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primary structure of rat ribosomal protein L19. A determinate
the sequence of nucleotides in a cDNA and from the sequence
o acids in the protein.";
                                  A48992;
              48992; A48992
HGNC:10312; 1
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em. 262:1111-1115(1987).
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9:697-703(1990).
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                  RPL19.
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Cole S.T., Brosch R., Parkhill J., Garnier T., Churcher C., Harris Gordon S.V., Eiglmeier K., Gas S., Barry C.E. III, Tekaia F., Gordon S.V., Eiglmeier K., Gas S., Barry C.E. III, Tekaia F., Badcock K., Basham D., Brown D., Chillingworth T., Connor R., Bavies R., Devlin K., Feltwell T., Gentles S., Hamlin N., Holroyd Hornsby T., Jagels K., Krogh A., McLean J., Moule S., Murphy L., Oliver S., Osborne J., Quail M.A., Rajandream M.A., Rogers J., Rutter S., Seeger K., Skelton S., Squares S., Squares R., Sulston J.E., Taylor K., Whitehead S., Barrell B.G.; "Deciphering the biology of Mycobacterium tuberculosis from the complete genome sequence.";
Nature 393:537-544(1998)."
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STRAIN=CDC 1551 / Oshkosh;

Fleischmann R.D., Alland D., Eisen J.A., Carpenter L., White O.,

Fleischmann R.D., Alland D., Eisen J.A., Carpenter L., Hickey E.,

Peterson J., DeBoy R., Dodson R., Gwinn M.L., Haft D., Hickey E.,

Kolonay J.F., Nelson W.C., Umayam L.A., Ermolaeva M.D., Salzberg

Kolonay J.F., Nelson W.C., Weidman J., Khouri H., Gill J., Mikula
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Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases.
-i-SUBCELUTLAR LOCATION: Integral membrane protein (Potential).
-i- SIMILARITY: BELONGS TO THE GLYCOSYLTRANSFERASE FAMILY 39.
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STRAIN=H37Rv;
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RV1002C OR MTCI237.17C OR MT1
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Pfam; PF02366; PMT; 1.
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120
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AE006986; AAK45281.1;
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Rv1002c; -.
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15-JUN-2002 (Rel. 4:
15-JUN-2002 (Rel. 4:
Uridine kinase (EC:
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Q96626;
Q1-NOV-1997
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16-OCT-2001
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Transferase; Kinase; ATP-binding; Complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complete particles of the complet
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Clostridium perfringens.
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Viruses; dsDNA viruses, n
VGBI_TaxID=114429;
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InterPro; IPR000764; Uridine_kin.
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